J Herzog

REPUBLIC OF TURKEY
PRIME MINISTRY
STATE PLANNING ORGANIZATION

FIRST FIVE YEAR
DEVELOPMENT PLAN

1963 - 1967

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FOREWORD

The first Five-Year Development Plan (1963-1967) was prepared for the Turkish people who have definitely chosen the democratic way of life which makes it possible to guarantee individual rights and the welfare and prosperity of both individuals and the community.

The Plan concords with the will and resolution expressed clearly in the Constitution to direct economic and social life to the pursuit of standards of living which are compatible with human dignity on the basis of equity and full employment and, in so doing, to end once for all attempts at unplanned and arbitrary conduct.

Its object is to realize economic, social and cultural progress by democratic means, to raise national savings and to plan investment activities in the order of priority and in the directions which will assure most benefit to the community as a whole.

1. After it was considered, in accordance with the provisions of Law No. 77 of October 16, 1962 on the Entry into Force and Preservation of the Integrity of the Long-Term Plan, in the Joint Planning Committee of the Grand National Assembly, in the Senate and National Assembly, the First Five-Year Development Plan was adopted on November 21, 1962 and promulgated in the Official Gazette No 11272 of December 3, 1962.

2. As from the promulgation of the Five-Year Development Plan in the Official Gazette, annual programs, which are the means of implementing the plan, will become operative as from January 1, 1963 as regards the private sector and State Economic Enterprises and as from March 1, 1963 as regards Government departments and agencies included in the general budget as well as municipalities and local administrations.

3. With the entry into force of the First Five-Year Development Plan, a new economic order has begun for our country.

This order requires that business men and all citizens perform their work in a spirit of wide comprehension and cooperation.

4. The tasks falling on the administration in the successful implementation of the Plan are to conduct its operations of regulation, guidance and control in conditions of openness, continuity and stability.

5. The duties incumbent upon the relevant Government departments and agencies, and on local administrations are to fulfill fully and on the required scale the public investments visualized in the plan.

6. It is expected of the private sector that it endeavors not to fall below the level of private investments envisaged in the plan. The efforts to be made by the private sector in this direction will receive all the administrative support that is compatible with the plan.

7. I believe that the success of planned growth will not only mean success in economic and social development but will also constitute a victory for the democratic order in Turkey. This conviction is based on the will of all the nation, from the rulers to the industrialists, business men, workers and university, and school teachers, to develop in democracy and freedom.

May the First Five - Year Plan be beneficial to our country and our people.

İSMET İNÖNÜ
Prime Minister

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PREFACE TO THE ENGLISH EDITION

With the Five-Year Development Plan, Turkey enters for the first time the period of "planned growth" in all the aspects of her economic and social life. Although industrial investment programs were undertaken in the past, no overall development plan had been prepared before in Turkey.

The Five-Year Development Plan represents the first extensive and detailed survey of the Turkish economy. It expounds economic principles, however simple or sophisticated, in terms of the situation in Turkey, and it formulates general policies and specific programs. The Plan was prepared to influence the future direction of Turkey's economic and social development in accordance with principles of economic efficiency and social justice.

The translation is as exact a rendering of the original text as possible. It is hoped that the general meaning will not be obscured by terminological and linguistic shortcomings.

INTRODUCTION

Turkey has entered the era of planned development within a democratic order. This attempt to achieve development aims through plans and programs is not the first experience of its kind in Turkey. The plans prepared in the early years of the Republic have yielded significant results.

Today, there is a great urge for development in the Turkish community. The bad results of an unplanned economy have led to the adoption of planning as an essential way to development. The fact that the idea of planning and the State Planning Organization are embodied in the Turkish Constitution is a clear expression of this.

There has been great progress in the techniques of economic and social planning all over the world. Considerable advance has been made in the experience of planned development within a democratic order. It is considered very important that the new development efforts in Turkey should make use of the experience gained in this respect in the rest of the world.

Turkey's development will be based on a new and progressive concept of planning which takes account of the whole of economic and social life and relies on the latest techniques. The "Development Plan", which has been conceived in a perspective of fifteen years and which covers the first five years (1963 - 1967) of this period, reflects this understanding.

The implementation of the "1962 Program", which was prepared to facilitate the transition to planned development, has been a useful orientation to the long-term plan.

The preparation of the Development Plan was based essentially on the "Plan Objectives and Strategy". The "Strategy" lays down the economic and social aims to be reached in this fifteen-year period, the means to be utilized to achieve these ends and the principles to be adhered to in the utilization of means. The aims and principles set forth in the "Plan Objectives and Strategy" take into account the structure, problems and resources of Turkey and are based on the belief that development can be attained by making use of the possibilities afforded by a mixed economy in a democratic system.

The social structure of Turkey is changing rapidly. Consequently, the problems confronting the country acquire an ever-growing importance.

The population increases at the very high rate of 3 per cent a year. Great masses live in very primitive conditions without any of the benefits of civilization. [illegible] per cent of the population of school age and above are illiterate. [illegible] per cent of the villages and [illegible] per cent of the small towns lack either [illegible] or [illegible] drinking water. [illegible] per cent of the population is without electricity. Out of every thousand infants born, 165 die within one year of their birth. 2.5 per cent of the population has tuberculosis. There is only one medical doctor to every 4.000 inhabitants. 30 per cent of city dwellings are unfit for habitation. 30 per cent of the population in the three largest cities live in single-room dwellings. The number of people living in shacks (gecekondu) amounts to 1.2 million.

It is essential to meet the needs of the continuously expanding population and to raise their standard of living.

Each year an over-growing number of people who reach working age swell the labor force, which is already far from being totally employed. It is necessary to create new employment fields.

If appropriate solutions, commensurate with the importance of these problems cannot be found in time, insurmountable difficulties will arise in the future. The level of income in Turkey is low. This makes it harder to find satisfactory solutions to problems. In view of this, the major objective should be to raise income levels, thereby making it possible to increase the amount of available resources.

The peoples' expectitions, i. e. desire for a better life, have made a rise in income levels an essential condition of social order. It has become impretive to concentrate all efforts on the attainment of a high rate of development which will enable Turkish people to live under conditions compatible with human dignity.

But there are many factors which limit a substantial increase of the growth rate. After considering Turkey's resources and the possibilities of mobilizing them, a target rate of growth has been set at a yearly average of about 7 per cent. With such a growth rate, the aims pursued will be reached only in the long run, but a significant step in this direction will have been taken.

The proposed rate of growth can only be attained through the people's collective efforts and willingness to accept austerity. Past experince shows that the Turkish nation has been successful whenever confronted with the need to act collectively even in times of difficulty. Turkey has been one of the forerunners of planned development. For its present development efforts Turkey has sufficient experience, established institutions and, most important of all, trained and competent personnel. It is the prime duty of the Turkish government to prepare the appropriate conditions for the best use of these resources.

In calculating the target rate of growth, the foreign resources that can be secured through international cooperation have also been taken into consideration. International cooperation will support and supplement the national effort.

The achievement of a high growth rate and the consequent rise in incomes is not the ultimate aim. The real aim is to promote social welfare. It is for this reason that the importance of social justice has been emphasized in the "Plan Objectives and Strategy" and the means of achieving this have been outlined. In the Development Plan, both with regard to the contributions to be made to development efforts and to sharing of the benefits of development, the aim has been to promote an equitable income distribution. Development on these lines will be directed to the establishment of a balanced social order consistent with democratic principles. The organization of collective development is a pre-condition for its success. The "Plan Objectives and Strategy" set out the principles of the basic reforms to be carried out in this connection, and the guiding lines of the necessary reorganization measures.

The resources to be mobilized to reach the yearly growth rate of 7 per cent in accordance with the principles of social justice, the way in which these resources are to be utilized, and the necessary reorganizations to be made and measures to be taken in various fields are set forth as interdependent parts of a whole in the Development Plan.

In the planning work, the most progressive techniques have been applied boldly on the one hand, and on the other, the necessary effort has been made to prepare a plan that would best conform to the realities of the country. In addition to general analyses, the present situation in various fields of activity, expansion prospects and the suggestions of the responsible people in these fields have all been separately studied. Sector studies and pre-project and project analyses have helped to determine plan targets on realistic lines. These studies have been made with the participation of experts in the fields concerned. To this end, information was collected and experts in official agencies, as well as in private agencies were consulted. The Development Plan is the product of the concerted efforts, collective study and joint work of the Turkish administration.

This collective work has ensured that the decisions regarding measures, reorganization, resources and expenditure are interrelated and form a consistent whole.

In addition to ensuring a realistic plan, this method assures that those who will be responsible for implementing the plan participate in its preparation.

SECTION I

DEVELOPMENTS IN THE ECONOMIC AND SOCIAL STRUCTURE OF TURKEY AND THE EXTERNAL ENVIRONMENT

INTRODUCTION

Economic and social development is a process that must be seen in the sequence of historical events and in the international context. It will accordingly be worthwhile to consider the five-year development plan in the light of national and international realities. Consideration will thus be given to:

Past developments in the Turkish community

Present situation and problems of the economy

The international background.

A BRIEF SURVEY OF PAST DEVELOPMENTS

In order to understand more clearly the situation prior to the five-year plan period into which Turkey has entered, the main changes undergone by the economy in the past will first be described and the recent ten-year period will then be studied in more detail.

(a) General Survey of the Period since 1923

There are no contiuous statistical series for the period extending from 1923 to the present. Population statistics, one of the most important of economic and social indicators, date from 1927 only.

TABLE 1 — Population of Turkey, 1927 - 1960

		1927	1935	1940	1945	1950	1955	1960
Total Population (thousands)		13 648	16 158	17 821	18 790	20 947	24 065	27 830
Rate of annual increase	%		1.9	1.6	1.07	2.20	2.82	2.95
Male proportion	%	48.1	49.1	49.9	50.3	50.3	50.8	51.1
Rural proportion	%	82.2	80.1	79.0	78.7	78.2	74.4	71.3

Since 1923, the population has doubled. With the exception of the Second World War years, the population has grown at an increasing rate. Although a steady movement towards urbanization can be observed, a substantial part of the population still continues to live villages and is engaged in agricultural activities.

In the forty years that have elapsed since the founding of the Turkish Republic, there have been some noteworthy advances on the economic and social front. Table 2 gives some figures in this respect.

TABLE 2 — Some Indicators of Economic and Social Developments

Years	Literacy Rate %	Number of Students (000)	Hospital Beds (000)	Electric Power (mil. Kw.)	Rail-roads (Km.)	Highways (Km.)
1923 (27)	10.6	350	3.3	.	3 756	18 335
1930	19.2	540	5.2	106.3	5 639	29 636
1940	22.4	1 110	11.9	396.9	7 381	41 600
1950	33.6	1 780	18.8	789.6	7 671	47 100
1960	40.1	3 340	45.0	2 886.0	7 800	61 500

The importance of the achievement in this period, particularly in the social field, could also be further illustrated by many other statistics similar to those given above. In this period many basic structural changes were carried out such as the adoption of the Latin alphabet, the reform of the legal system, the recognition of equal rights to women insocial life, and the reorganization of the administration and of the education system on the basis of secular and modern principles. Despite this progress which seems remarkable with reference to the position in 1923, Turkey today has not yet been able to attain the status of an advanced nation. It is a fact that the reforms carried out in the last forty years have not yet produced an industrial revolution in Turkey and have not sufficed to give the economy a dynamic structure with a high rate of saving. In order to examine this question more closely, it is necessary to study the total and per capita income series for this period. But continuous national income figures date only from 1948 and these are merely estimates based on production figures. However, Table 3 shows the broad outlines of the changes in national income since 1927, estimated on the basis of certain available computations.

TABLE 3 — Indices of National Income, Per Capita Income and Agricultural Production

(1938 = 100)

	1927	1938	1945	1950	1958	1961
National Income	53	100	77	121	213	226
Per Capita Income	65	100	69	101	129	125
Agricultural Output	57	100	74	116	199	205

It can be seen that the greater part of the increase in national income is offset by the rise in population. Consequently, although a substantial increase of total national income has been achieved, the rise in per capita income has been slight. In other words, the standard of living of the people has not risen significantly. When per capita incomes are compared to those in other countries, it is evident that the economy has not yet reached a state of high savings - investment capacity.

In spite of a marked urbanization trend, over 70 per cent of Turkey's population as seen from Table 1, still lives in villages. The same conclusion may be reached from a study of the composition of national income. Although the share of agriculture in the national income is declining steadily, the structure of the economy is still one in which agriculture predominates. On the other hand, as appears from Table 1, a significant structural change is taking place, which accounts for most of today's social problems. The developments observed indicate that problems in Turkey present a dynamic character. If suitable measures cannot be worked out in time, these problems will tend to become more severe.

TABLE 4 — Share of Agriculture, Industry and Services in National Income

	1927	1938	1948	1950	1958	1961
Agriculture	67	48	53	52	44	42
Industry	10	16	14	16	22	23
Services	23	36	33	32	34	35
National Income	100	100	100	100	100	100

(1) Early Years (1923 - 1938)

This period is chiefly characterized by the endeavours to establish the foundations of a modern, westward - oriented community on the ruins of the Ottoman Empire, and by the efforts to ensure the minimum subistence needs of a population which was worn out by the war and had lost much in regaining its independence. The drive for development had to be started in Turkey under conditions incomparably more difficult than those in other countries. Whereas the First World War was over for other countries in 1918, Turkey was involved until the end of 1922 in an exteremely severe fight for survival. The Republic was instituted in a country which had been completely devastated in that long period. The new Turkish State had, moreover, to be set up without any outside help. With very limited resources but with great enthusiasm, forward steps of considerable importance for their time were taken. If it is recalled that a substantial amount of external debts were repaid in this period and that no new debts were incurred, the magnitude of the efforts made will be better understood.

In the first years of the Republic, Turkey had a relatively high volume of foreign trade in comparison to its national income. The volume of foreign trade was around 15 to 20 per cent of national income. Turkey's export products were sold at fair prices on foreign markets and the major part of her industrial goods requirements were met by imports. This situation continued until the years of the Great Depression. With the disruption of foreign trade following the world crisis, difficulties arose with regard to meeting requirements. Industrialization or capital accumulation had not as yet taken place to any appreciable extent. Private enterprise had not been able to create any significant capital accumulation in domestic industries. An almost complete lack of capital prevailed. It was under such conditions that it was decided to accelerate the pace of industrialization. The task of large-scale capital formation was assumed by the State, and State Economic Enterprises began to be set up as part of industrial plans prepared.

Turkey's first and second industrial plans were not economic development plans by today's standards. They were technical plans aimed at equipping the country with large-scale basic industries. Social factors and the attainment of self sufficiency were preponderant considerations in the selection of investment fields.

(2) War Years (1939 - 1945)

The fact that Turkey stayed out of the Second World War did not entirely protect her from its effects. The burden imposed on the economy by the need for mobilization and the severance of relations with the external world caused great hardships. Shortages and restrictions appeared on the market as a result of the conscription of the greater part of the labor force and the cessation of foreign trade; inflation developed rapidly. Economically, the war years were a period of great difficulties.

(3) Post-War Years (1946 - 1950)

At the end of the war, Turkey had to contend with claims and pressures which threatened the integrity of her territory. This led to the maintenance for a further period of the heavy defence charges sustained in the war years and delayed the return to peacetime conditions. This situation, together with the fact that Turkey was then primarily involved in the struggle to effect the transition to a multi-party system, retarted the process of development which could not be pursued with the necessary energy.

Turkey emerged from the war with considerable gold and foreign exchange reserves after all external debts had been discharged. These reserves were at a level sufficient to produce the first impetus for development. However, the fact, on the one hand, that world demand for investment goods was at a level high enough to occupy fully for a number of years the productive capacity of supplier countries, and the widespread currency adjustments carried out by foreign countries on the other hand, ruled out the possibility of making immediate use of the available means of foreign payment for development purposes.

The necessary studies and technical preparations for development on systematic lines were started in 1948 and the first problems dealt with in that year. Thus, the period beginning in 1950 opened with preparations in the fields of social investment and agricultural expansion at a time when external aid was being made available.

(4) Inflationist Expansion Years (1951 - 1958)

With the ending of post-war difficulties and the increase of foreign aid, the economy entered a dynamic phase. A rapid expansion took place, promoted by such factors as abundant imports and foreign assistance, the mechanization of agriculture which made a speedy extension of the cultivated area possible, a succession of good crop years, and the favorable international trade situation resulting from the Korean War.

The 1950 - 53 period is economically on eof brisk activity and abudance. Turkey, which could not find enough outlets for her surplus production, began to be regarded as a potential grain supplier on a world scale. The rapid increase of investments in the early years of this period was met by substantial growth of farm output and by external aid.

Towards the middle of the period, however, when the limit of cultivable land was reached, bottlenecks began to appear; further strains led to inflation, to steadily growing deficits in the balance of payments and, finally, to the severe imbalance of the economy.

The economic policy of these years is also different from that of the earlier period. The economic policy which started by following a very liberal course in both internal and external markets was drawn towards more and more controls as shortages and difficulties were encountered. By the end of the period, the economy was in a state of complete imbalance and impotence and could only survive by day today measures.

(5) Stocktaking Years (1959 - 1961)

On August 4, 1958, a stabilization policy of considerable scope was adopted to deal with the bottlenecks in both domestic and foreign trade. Turkish money was devalued de facto, foreign trade difficulties were eased with the help of substantial foreign aid and a credit squeeze was implemented. The revolution of May 27, 1960 took place before the results of the stabilization measures could be fully known. In this period, inflation came to an end, normal price relationships were re-established, and some confused situations, especially with regard to debts and loans, were straightened out. However, these were also years of rather low bussiness activity.

(6) A Closer Look at the 1950 - 1962 Period

In the above review of the years 1923 to 1961, five periods were distinguished in order to present a general picture of the development process in Turkey. Within the context of this broad view, it will be useful to have a closer look at the last two periods. The statistical series for this period are of a much better quality and a more coherent analysis can therefore be attempted.

(1) Population

As can be seen from Table 5, the rate of population increase in Turkey has approached the very high level of 3 per cent per annum in the recent past. The reason for this high rate is both the increase in the birth rate and the decrease in the death rats. Although the decrease in the death rate is especially significant in the youngest are groups, there is a fall in the death rate of the older age groups as well.

The increase in the urban population as a proportion of total population indicates that migration from rural to urban areas is still continuing.

TABLE 5 — Population Increase and Composition

Years	Total population (000)	Urban population (000)	Rural population (000)	Share of Urban population in otal population (%)	Total population increase (%)	Urban population increase (%)	Rural population increase (%)	Active population in age group 15 and above (000)
1950	20 947	4 538	16 409	21.7	2.82	63.0	17.6	10 020
1951	21 536	4 824	16 712					
1952	22 142	5 128	17 014					
1953	22 765	5 451	17 314					
1954	23 406	5 794	17 612					
1955	24 065	6 159	17 906	25.6	2.95	53.4	20.8	11 620
1956	24 775	6 488	18 387					
1957	25 506	6 834	18 672					
1958	26 258	7 199	19 059					
1959	27 033	7 583	19 450					
1960	27 830	7 984	19 845	28.7				13 200

(2) National Income

In Turkey approximately 40[1] per cent of the national income is derived from agriculture. Therefore developments in the national income are, to a considerable extend, related to agriculture. The fact that certain income categories in national accounting are included in agriculture causes this relationship to be magnified. Income from manufacturing is only about 14 per cent of national income.

Three stages can be distinguished between 1950 and 1962 with respect to the rise in national income (See Tables 6 and 7). 1950 - 1953 are the years of rapid increase. The rise in agricultural production whicn was the result of the expansion in cultivated land, favourable weather, and good markets continued until 1953 at a high speed.

There appears to have been a 5 - 6 per cent annual increase during the period which began with the bad crop year of 1954 and ended in 1958; however, taking 1953 as a base year, the average annual increase during this period was only about

TABLE 6 — Turkish National Income According to Production Sectors at Current Prices

(Million T.L.)

	1948 (1)	1950 (2)	1951 (3)	1952 (4)	1953 (5)	1954 (6)	1955 (7)	1956 (8)	1957 (9)	1958 (10)	1959 (11)	1960 (12)	1961 (13)
1. Agriculture	4691.4	4472.0	5563.9	6193.3	7234.7	5927.2	7638.2	9096.3	12004.9	13746.2	16357.0	18016.1	17420.9
2. Industry	926.3	1094.4	1250.3	1490.9	1839.7	2248.4	2578.5	3290.2	4157.8	5418.7	6797.5	7159.1	7220.4
3. Construction	280.3	319.2	380.7	520.0	692.8	852.3	1062.3	1237.6	1672.4	2044.7	2543.2	2216.4	2364.7
4. Commerce	960.6	951.9	1080.9	1317.4	1644.1	1797.0	2382.6	2144.1	2243.6	2513.9	3439.1	3787.9	3511.5
5. Transportation	460.3	467.9	559.5	791.8	863.1	1030.9	1243.5	1452.7	1774.5	2007.6	2444.3	2896.0	2823.7
6. Financial Institutions	129.4	152.8	216.2	243.3	303.3	398.5	521.5	642.7	788.0	954.6	976.9	2967.0	3167.8
7. Professions	325.3	353.8	433.7	507.9	540.1	640.6	841.6	992.3	1184.0	1405.2	1610.8		
8. Income from Dwellings	237.5	251.7	278.5	310.5	354.1	479.8	530.4	712.6	886.9	1196.3	1254.0	1429.8	1581.0
9. Government	877.6	911.8	953.9	1080.6	1255.0	1454.6	1494.6	1725.4	2049.8	2333.6	3193.2	3764.4	4182.0
10. Domestic Income	8834.7	8984.5	10717.6	12455.7	14726.8	14829.3	18293.2	21293.9	26762.5	31620.8	38616.0	42236.7	42272.0
11. Income from Abroad	—20.0	—20.3	—23.8	—31.6	—30.4	—44.3	—73.5	—97.0	—139.3	—145.9	—228.1	—240.9	—250.0
12. Net National Product (at factor cost)	8314.7	8964.2	10693.8	12424.1	14696.4	14785.0	18219.7	21196.9	26023.2	31474.9	38387.9	41995.8	42022.0
Index (12)	100	101.7	121.3	140.9	166.7	167.7	206.7	240.5	302.0	357.1	435.5	476.4	476.7
13. Indirect Taxes	913.8	1014.2	1116.4	1355.3	1522.6	1630.5	1934.0	2040.5	2676.1	3084.7	4436.8	4900.0	4998.0
14. Net National Product (at market cost)	9728.5	9978.4	11810.2	13779.4	16219.0	16415.5	20153.7	23237.4	29299.3	34559.6	42824.7	46895.8	47020.0
15. Depriciation	338.5	405.9	460.6	541.1	602.0	690.3	905.8	1096.6	1229.4	1548.4	1879.0	2067.0	2193.0
16. G.N.P. (at market price)	1006.0	10384.3	12270.8	14320.5	16821.0	17114.8	21059.5	24334.0	35128.7	36108.8	44703.7	48962.8	49213.0
Index (16)	100.0	103.2	121.9	142.3	167.1	170.0	209.2	241.7	303.3	358.7	444.1	486.4	488.9

TABLE 7 — Turkish National Income at Constant Prices (at 1961 factor prices)

(Million T.L.)

	1948 (1)	1950 (2)	1951 (3)	1952 (4)	1953 (5)	1954 (6)	1955 (7)	1956 (8)	1957 (9)	1958 (10)	1959 (11)	1960 (12)	1961 (13)
1. Agriculture	12479.8	12106.8	14613.4	15557.2	17033.8	13675.6	14915.6	16212.6	16621.2	16621.2	17618.5	18376.4	17420.9
2. Industry	3700.5	4051.3	4390.1	4756.1	5238.0	5486.9	5705.3	6078.3	6519.8	6976.0	7321.6	7302.0	7220.4
3. Construction	814.9	1322.0	1375.2	1658.4	2299.9	1904.8	2000.5	2029.6	2511.7	2700.2	2739.2	2260.6	2364.7
4. Commerce	2296.3	2275.8	2695.9	2877.4	3155.2	2668.5	2882.0	3118.7	3228.9	3699.7	3704.3	3863.5	3511.5
5. Transportation	971.1	1167.1	1273.8	1559.2	1664.9	1999.4	2207.9	2291.4	2451.9	2430.7	2632.8	2954.8	2823.7
6. Financial Institutions and professions	1086.9	1250.0	1417.1	1587.8	1702.3	1900,0	2217.5	2310.3	2469.8	2747.9	2787.1	3026.3	3167.8
8. Income from Dwelings	567.5	576.6	615.4	665.4	715.9	771.6	853.6	984.4	1165.9	1238.4	1350.8	1458.4	1581.0
9. Government Services	2097.9	2138.1	2254.5	2417.1	2772.6	2981.1	2926.9	2972.8	3297.3	3496.0	3439.4	3839.6	4182.0
10. Domestic Income	24014.9	24887.7	28635.4	31078.6	34582.6	31387.9	33711.3	35998.1	38226.5	39910.1	41593.7	43080.6	42272.0
11. Income from Abroad	—139.3	—143.5	—165.8	—179.8	—200.1	—181.3	—195.3	—208.6	—221.2	—249.2	—250.6	—245.7	—250.0
12. N.N.P. (at factor cost)	23875.6	24744.2	28469.6	30898.8	34382.5	31206.6	33516.0	35789.5	38045.3	39660.9	41343.1	42834.9	42022.0
13. Indirect Taxes	2654.0	2738.3	3170.5	3440.6	3826.1	3452.0	3714.9	3966.5	4213.4	4728.7	4779.0	4998.0	4998.0
14. N.N.P. (at market prices)	26529.6	27482.5	31640.1	34339.4	38208.6	34658.6	37230.9	39756.0	42258.7	44389.6	46122.1	47832.9	47020.0
15. Depreciation	951.1	1008.5	1127.1	1252.8	1362.7	1394.5	1511.5	1625.4	1765.7	1891.7	2023.9	2108.3	2193.0
16. G.N.P.	27480.7	28491.0	32767.2	35592.2	39571.3	36053.1	38742.4	41381.4	44024.4	46281.3	48146.0	49941.2	49213.0

3 per cent. After 1958, Turkey enters a period of stagnation with about 2 or 3 per cent annual increases in national income.

TABLE 8 — Per Capita Income

Years	Per Capita Net National Product at 1961 Factor Cost (TL.)	Index of Per Capita Increase in Income 1950=100	Index of Increase in Total Income 1950=100
1950	1 181	100	100
1951	1 316	111	115
1952	1 391	118	125
1953	1 507	128	139
1954	1 332	113	126
1955	1 393	118	135
1956	1 445	122	145
1957	1 492	126	154
1958	1 511	128	160
1959	1 530	130	167
1960	1 539	130	173
1961	1 469	124	170

(3) Investments

Turkey's national income is estimated only through the production side. There are no reliable figures showing the allocation of the national income to consumption and investment expenditures. The results of a preliminary study in this direction are given in Table 9.

For the greater part of the period, gross investments in Turkey vary between 12 and 15 per cent of GNP. A part of the investments equal to about one to three per cent of the GNP has been financed through external resources (grants or credits). The domestic savings rate thus varies between 9 and 13 per cent of the GNP.

TABLE 9 — Investments (Gross)

Years	Machinery and Equipment (Million TL.)	Construction (Million TL.)	Total (Million TL.)	Per cent of GNP (%)
1950	325.0	675.0	1 000.0	9.63
1951	497.6	762.8	1 260.4	10.27
1952	791.7	1 044.1	1 835.8	12.82
1953	718.3	1 369.4	2 087.7	12.41
1954	750.6	1 767.0	2 517.6	14.71
1955	847.9	2 158.2	3 006.1	14.27
1956	864.5	2 395.8	3 260.3	13.40
1957	886.4	3 130.6	4 017.0	13.16
1958	1 375.4	3 667.4	5 042.8	13.97
1959	2 389.0	4 600.0	6 989.0	15.63
1960	2 875.0	4 904.0	7 779.0	15.89

(4) Basic Goods

The figures of consumption or production of some basic goods which are important indicators of industrialization are given in Table 10.

TABLE 10 — Basic Goods

Years	Iron & Steel (Consumption) Tons	Electricity (Production) 10^3 Kw	Fuel (Consumption) 000 tons	Coal (Production) 000 tons	Lignite (Production) 000 tons	Cement (Production) 000 tons	Cement (Imports) 000 tons
1950	310 210	789,6	—	2 931	971	395	135
1951	307 536	887.9	619	2 915	1 039	396	243
1952	357 702	1 020.3	792	3 008	1 063	459	389
1953	527 895	1 200.8	867	3 682	1 261	531	537
1954	416 878	1 402.9	939	3 709	1 506	703	629
1955	500 885	1 579.8	1 159	3 512	1 692	819	811
1956	417 752	1 819.2	1 157	3 670	2 301	970	293
1957	392 922	2 056.7	1 296	3 914	2 829	1 261	299
1958	340 441	2 303.4	1 335	3 840	2 972	1 517	20
1959	512 875	2 586.0	1 406	3 860	2 750	1 734	2
1960	530 924	2 815.0	1 594	3 907	2 789	2 038	4

(5) Public Finance

The public sector in Turkey is administered through general, annexed and local budgets. The State Economic Enterprises can also be included in this sector. But, as these institutions engage in activities which cannot be fitted into the traditional budget pracices, the State Economic Enerprises can best be treated separately.

Public revenue, public expenditure, and the ratios of these to GNP in the last twelve years are shown in Table 11.

TABLE 11 — Public Revenue and Expenditure (General and Annexed Budget)

Years	Public Revenue (Mill. TL.)	Per cent of GNP (%)	Public Expenditure (Mill. TL.)	Per cent of GNP (%)	Deficit (Mill, TL.)
1950	1 670.6	16.1	1 826.9	17.6	156.3
1951	1 821.3	14.8	2 023.6	16.5	202.3
1952	2 336.3	16.3	2 587.0	18.1	250.7
1953	2 250,1	13.4	2 511.8	14.9	261.7
1954	2 300.9	13.4	2 662.0	15.6	361.1
1955	2 694.7	12.8	3 394.3	16.1	699.6
1956	3 260.2	13.4	3 771.2	15.5	511.0
1957	3 948,5	12.9	4 302.6	14.1	354.1
1958	4 548.5	12.6	5 136.3	14.2	587.8
1959	6 012.7	13.5	6 945.5	15.5	932.8
1960	6 333.0	12.9	7 631.5	15.6	1 298.5
1961	7 462,9	15.2	9 036.4	18.4	1 573.5
1962	8 774.9	16.7	10 479.2	19.9	1 704.3

TABLE 12 — Public Revenue (1950 - 1962)

(Million TL.)

	TAX REVENUE								
Years	Direct Taxes	Indirect Taxes	Duties and Fees	Income from Monopolies	Total (1+2 +3+4)	Other Public Revenues	Revenues from Annexed Budget	Special public Funds	Total Normal Public Revenue
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1950	447.9	529.8	82.7	181.5	1241.9	57.7	360.0	11.0	1670.0
1951	294.7	656.9	94.9	190.1	1236.6	116.0	433.2	35.5	1821.3
1952	414.0	826.5	130.7	208.9	1580.1	71.2	338.6	346.4	2336.3
1953	544.7	903.4	131.6	273.6	1853.3	83.3	217.9	95.6	2250.1
1954	687.7	965.2	157.9	283.8	2094.6	89.7	97.6	19.0	2300.9
1955	818.5	1084.0	183.3	395.7	2481.5	102.3	85.8	25.1	2694.7
1956	1047.6	1165.3	185.9	416.6	2815.4	133.9	284.2	26.7	3260.2
1957	1178.8	1356.3	286.4	449.9	3271.4	487.8	139.9	49.4	3948.5
1958	1364.3	1605.5	344.2	554 8	3868.8	478.5	159.1	42.1	4548.5
1959	1847.9	2531.1	410.9	586.1	5376.0	380.2	217.5	39.0	6012.7
1960	2173.9	2317.8	414.8	634.7	5541.2	414.1	311.3	66.4	6333.0
1961	2623.3	2616.9	440.3	883.3	6563.8	515.4	357.7	26.0	7462.9
1962	3126.9	3205.7	475.8	1010.0	7818.4	577.2	364.3	15.0	8774.9

TABLE 13 — Distribution of Public Expenditure between Current Expenditures and Investments

Years	Current Expenditures (Million TL.)	Investments (Million TL.)	Investments as Percentage of Total Expenditure	Investments as Percentage of GNP
1950	1 528.5	298.4	16.3	2.9
1951	1 653.3	370.3	18.3	3.0
1952	2 061.0	526.0	20.3	3.7
1953	1 853.9	657.9	26.2	3.9
1954	2 003.0	659.0	24.8	3.9
1955	2 531.8	862.5	25.4	4.1
1956	2 702.4	1 068.8	28.3	4.4
1957	2 916.8	1 385.8	32.2	4.5
1958	3 588.9	1 547.4	30.1	4.3
1959	4 895.8	2 049.7	29.5	4.6
1960	5 273.7	2 357.8	30.9	4.8
1961	6 175.2	2 861.2	31.7	5.8
1962	7 016.6	3 462.6	33.0	6.6

It is evident from the above table that the ratio of investments in the general and annexed budgets (including investments of the State Economic Enterprises financed through these budgets) to both total expenditure and GNP rises gradually throughout the period.

TABLE 14 — Sectoral Distribution of Development Investments in the Budget

(Million TL.)

Sectors	1959	1960	1961	1962
Agriculture	171.7	172.1	249.8	373.0
Mining	3.2	2.2	104.1	147.6
Energy	442.2	473.8	481.3	511.3
Industry	20.8	11.1	45.7	79.3
Transport and Communications	915.5	1 255.2	1 046.2	1 037.1
Education	132.1	255.3	335.8	415.0
Health	25.0	40.7	33.7	58.6

TABLE 15 — Financing of the Budgetary Deficit

(Million TL.)

Years	Deficit Financing	Internal Debt Voluntary	Forced	External Grants	Sources Credist	Counter-part Funds	Total
1950	47.9	19.0		81.2	8.2		156.3
1951	(55.5)	60.0		80.0	72.6	45.2	202.3
1952	13.1			20.0	90.4	127.2	250.7
1953	21.9	125.0			6.3	108.5	261.7
1954	173.9				42.7	144.5	361.1
1955	160.5	58.0		282.5	44.6	154.0	699.6
1956	182.3	74.9			64.7	189.1	511.0
1957	196.2				10.8	147.1	354.1
1958	155.0				7.2	425.6	587.8
1959	342.2				1.2	588.4	932.8
1960	387.0	177.6				733.9	1 298.5
1961	575.3		448.2			550.0	1 573.5

(6) Money and Prices

Turkey, like many other countries, passed through a period of relatively rapid inflation during the Second World War. This was followed by price stability between the years 1945 and 1951. In 1951, prices started to rise again (See Table 16) and after 1954 this rise started gaining momentum to approach a state of hyperinflation. As the situation deteriorated, it was decided to apply a stabilization programme in August, 1958. This programme was aimed at ending deficit finance and halting the expansion in money supply. Prices continued to rise for a while after August 1958, but after the middle of 1959 the price level was relatively stable.

Since price movements in Turkey were the result of changes in the money supply (as can be seen in Table 17) the stabilization policy was mainly concerned with monetary measures. The end of year figures for money and banking data are given in Table 17. The developments in bank deposits seem to follow the currency supply quite closely. Because of this relationship, the factors that affect the volume of central bank notes also determine the general money supply.

The 1958 stabilization programme imposed restrictions and limits on the note issue of the Central Bank and the credit expansion of other banks, adjusted the external value of the Turkish lira by a system of premiums, and tried to remove bottlenecks and shortages with the help of substantial foreign aid. The positive effects of the stabilization programme on the general price level could only be observed towards the middle of 1959. The reasons for this long delay include the following : restrictions were not applied strictly and it was necessary to raise the prices of some products of the State Enterprises in order to cover their costs. In addition to these, some prices in the price indices were artificially low, the reason being that the prices used were the officially controlled prices which were far below the actual prices on the market (or the black market).

The rise in the general price level since the middle of 1959 has been very moderate. After an inflationary period of eight or nine years, the last three years have been a term of considerable price stability. In retrospect, it can be claimed that the stabilization policy was a successful operation.

TABLE 16 — General Price Level

Years	Whosale Price Index (Ministry of Commerce)	Ankara Cost of Living Index (Central Statistical Office)
1950	100	100
1951	107	103
1952	108	107
1953	110	110
1954	121	119
1955	131	141
1956	153	151
1957	181	174
1958	208	208
1959	250	258
1960	263	264
1961	271	264

TABLE 17 — Central Bank Notes, Coins and Bank Deposits End of Year

(Million TL.)

	Money Central Bank		Official Deposits			Commercial Deposits			Saving Deposits			Total Deposits		
Years	Notes	Coins	Time	Sight	Total	Time	Sight	Total	Time	Sight	Total	Time	Sight	Total
1950	961	41	203	26	229	273	51	324	449	129	578	925	206	1 131
1951	1 138	44	302	68	370	365	63	428	626	120	746	1 293	251	1 544
1952	1 237	47	352	203	560	485	41	526	775	114	889	1 617	358	1 975
1953	1 414	51	366	281	622	666	113	779	1 044	122	1 166	2 076	516	2 592
1954	1 474	56	419	347	766	713	115	828	1 294	130	1 424	2 426	592	3 018
1955	2 008	63	550	352	902	858	132	990	1 563	165	1 728	2 971	619	3 620
1956	2 525	69	584	497	1 081	1 094	99	1 193	2 037	237	2 274	3 715	833	4 548
1957	3 199	84	664	566	1 230	1 235	88	1 323	2 788	307	3 095	4 687	961	5 648
1958	3 430	96	714	642	1 356	1 325	87	1 412	2 997	365	3 362	5 036	1 094	6 130
1959	3 268	112	995	697	1 692	1 565	103	1 668	3 610	430	4 040	6 170	1 230	7 400
1960	4 452	136	1 049	848	1 897	1 604	104	1 708	3 682	684	4 366	6 335	1 636	7 471
1961*	4 830	161	1 135	248	1 383	1 489	110	1 599	3 621	922	4 543	6 245	1 280	7 525

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* October figures,

(7) Foreign Trade

Turkey's import, export and foreign trade deficits are shown in Table 18.

TABLE 18 — Foreign Trade Situation

(Million $)

Years	Imports	Exports	Deficit
1950	285.7	263.4	22.3
1951	402.1	314.1	88.0
1952	555.9	362.9	193.0
1953	532.5	396.1	136.4
1954	478.4	334.9	143.5
1955	497.6	313.3	184.3
1956	407.3	305.0	102.3
1957	397.1	345.2	51.9
1958	315.1	247.3	67.8
1959	470.0	353.8	116.2
1960	468.2	320.7	147.5
1961	509.5	346.7	162.8

Note : The figures are in dollars in order to assure comparability.

Almost no expansion has taken place in foreign trade in spite of developments in other fields. There seems to be chronic deficit in the foreign trade balance. The level of the foreign trade deficit is particularly affected by weather conditions on the export side and external credit possibilities on the import side. Statistics also bear out the fact that adjustments in the exchange rate in 1958 did not help to restore the foreign trade balance in any significant way. The debt burden accumulated as a result of chronic deficit has put the foreign balance in an even more vulnerable position. At the present level of indebtedness, Turkey will have a big debt servicing burden in the coming years.

(8) Economic Policy

The years 1950 to 1962 have significance for two reasons : this period is a turning point in the development of the Turkish economy and provides clues about the causes of the present conditions. Developments in economic problems and mechanisms and their consequences can be summarized as follows :

. The new government which came to power in 1950 started with the intention of adopting a liberal economic policy. In the first few years this oplicy was adhered to. The period from 1950 to 1952 was one of internal and external stability. But as the abundance and the growth oft he first few years disappeared and shrotages developed, the

State increased its interventions in economic activities and more and more controls were imposed on domestic and foreign trade.

The new land that was brought under cultivation, foreign aid, and favorable markets in the early years, generated a big increase, especially in agricultural income. The large investments that were undertaken and the continualy increasing public expenditures were met through deficit financing. Due to favorable foreign balances and the rise in real national income, the expansion in the money supply was not immediately reflected in prices. But soon the domestic and external value of money started to fall. The Government tried to prevent the drop in the value of money in two ways. On the hand, it tried to stop the rise in prices by legal sanctions and price controls and, on the other hand, the State Enterprises were forced to sell at prices below their costs and operate at a loss. These losses meant an additional burden on the resources of the Government and led to more deficit financing. Thus an inflationary spiral developed. This extreme inflationary policy was terminated when the stabilization policy of August, 1958 was adopted and the economy was thus saved from the threshold of monetary-bancruptcy.

It is difficult to pass a sweeping judgement on the eight-year policy of deficit financing, inflation and physical controls. There are some arguments to the effect that investment increased, business became very brisk and enterprise was encouraged. Indeed, the dynamism, vigour and, mobility that was introduced into the economy cannot be denied. The degree to which these results should be attributed to deficit financing cannot be precisely stated; on the other hand, the following instances of the damage that inflationary policy caused can be cited.

First, inflation altered the income distribution in the country in a very unjust direction. The burden of inflationary finance was imposed on a limited group of the population and the real incomes of fixed income recipients diminished steadily.

Secondly, because money declined in value while the exchange rate was nevertheless maintained artificially at a high level, exports fell, imports increased, and the resulting shortage of foreign exchange led to the imposition of physical controls on all foreign trade. This situation gave rise to capital flight in addition to the instability and arbitrariness it introduced.

Perhaps the worst consequence of inflation and controls was the disruption of the price mechanism and the disappearance of normal markets. As a result, the economy was strangled by a very unproductive regulatory system, on the one hand, while, on the other, there developed a misallocation of resources whose harmful effects are felt even today. As an economy develops, the market and its institutions (commodity exchanges, money and capital markets) evolve, but in Turkey the opposite happened and the economy lost whatever fluidity it had. In the end, prices lost their function of reflecting alternative uses and costs. Production was interrupted as a result of bottlenecks and, what was worse, investments were channelled to fields which were unproductive for the economy as a whole.

It is consequence of the economic policy of this period that Turkey today faces a problem of adjustment and reorganization in the economy.

(9) Defence Expenditures

Since the early days of the Republic, the Turkish economy has been obliged to allocate an important portion of its resources to national defence purposes. This also continued after the Second World War. This situation, which has been referred to in the relevant passages of the plan and which has had a negative effect on development efforts, may be seen in Table 19.

TABLE 19 — Defence Expenditures

Years	National Defence Expenditures (TL.) *	Percentage of GNP	Percentage of Total Investments	Percentage of General Budget Expenditures	Percentage of General and Annexed Budget Expenditures
1950	441 702 691	4.25	44.2	30.1	24.2
1951	468 032 559	3.81	37.1	29.4	23.1
1952	610 996 864	4.27	33.3	27.2	23.6
1953	711 110 125	4.23	34.1	31.0	28.3
1954	833 575 011	4.87	33.1	32.5	31.3
1955	1 160 774 806	5.51	38.6	35.1	34.2
1956	979 464 140	4.03	30.0	28.1	26.0
1957	1 060 093 923	3.47	26.4	25.5	24.6
1958	1 396 454 184	3.87	27.7	28.1	27.2
1959	1 736 104 579	3.88	24.8	25.8	25.0
1960	1 727 531 638	3.53	22.2	23.4	22.3
1961	2 113 923 651	4.29	28.2	24.4	23.4
1962	2 555 864 092	4.85	29.7	25.3	24.4

(*) 1961 and 1962 figures are those of the Budget; others are expenditure figures.

PRESENT SITUATION AND MAIN PROBLEMS OF THE ECONOMY

Today Turkish economy is again at a turning point. In this transition to an era of planned development, it will be appropriate to give information on some of the basic issues, to consider briefly the main bottlenecks and to point out the institutions that must be given immediate attention.

The following figures are significant indicators of the magnitude of the problems that must be considered in Turkey. Of the population of school age and above, 60 per cent is illiterate. 53 per cent of the villages and 55 per cent of the small towns have either no drinking water or not enough, 69 per cent of the population is without electricity. Out of every 1,000 babies born, 165 die in the first year. 2.5 per cent of the the population has tuberculosis. There is one medical doctor for every 4,000 inhabitants and in the hospitals 1 nurse for every 111 beds. There are 60 students for every school teacher and 25 - 30 villages to every agricultural expert. On the average, there are 2.7 persons per residential room in the cities and 2.1 in the villages. 30 per cent of the city dwellings are in very poor condition and not fit for habitation. In the three biggest cities, 30 per cent of the population live in single-room dwellings. The number of people living **gecekondus** (shacks) is 1.2 mililon.

The population in Turkey is increasing very rapidly. It is calculated that even at the most active season, there are about one million unemployed in the agricultural sector. Both the present unemployed and future additions to the labor force are resources that can be utilized for economic development purposes and at the same time a social problem that must be solved. The economic policy with respect to this problem cannot neglect the employment objective.

The expansion of cultivated land which started in 1950 has now reached its limit.

TABLE 20 — Cultivated Land in Turkey

Years	Cultivated (000 ha.)	Fallow (000 ha.)	Total (000 ha.)	Cultivated Land as Percent of Total Area	Percentage Increase *
1944	8 170	4 814	12 984	16.7	—
1950	9 868	4 674	14 542	18.7	12
1951	10 600	4 672	15 272	19.5	5
1952	11 775	5 586	17 361	22.3	8
1953	13 021	5 791	18 812	24.2	11
1954	13 208	6 408	19 616	25.2	4
1955	14 205	6 793	20 998	27.0	7
1956	14 556	7 897	22 453	28.8	7
1957	14 392	7 769	22 161	28.5	1
1958	14 764	8 001	22 765	29.2	2
1959	15 020	7 920	22 940	29.5	1
1960	15 305	7 922	23 264	29.9	1

(*) Annual rate of increase of column 3.

As can be seen, any future increase in agricultural production will depend on improvements in unit yields. Wheat yields per hectare since 1950 are shown in Table 21.

TABLE 21 — Wheat Yields per Hectare

Years	Kg. per Hectare
1950	942
1951	1 213
1952	1 241
1953	1 295
1954	854
1955	1 029
1956	955
1957	1 195
1958	1 201
1959	1 103
1960	1 175
1961	983

The yield per hectare is very low. The fact that yields in agriculture have increased by only 27 percent in thirty years shows that the trend has been towards extensive rather than intensive agriculture. It therefore seems that the easy way to agricultural expansion has run its course and the difficult era has started. Investments in irrigation will be costly undertakings. Fertilizers also require heavy expenditure. What is more unless the present inefficient farm management methods are improved the probability of benefitting from public investments is low. For these reasons, a basic agricultural reform is an unavoidable necessity.

A basic reorganization is also necessary in the State Economic Enterprises which consitute an important part of the national wealth. These establishments are of vital interest from the point of view of development; most of the future public investments will be made by these enterprises. In their present state, these organizations lack a rational management policy and a consistent investment policy. These enterprises must be organized an a new basis in order to be able to play an important part in development of the country.

DEVELOPMENT OF TURKEY AND THE EXTERNAL ENVIRONMENT

The development of Turkey cannot be considered in isolation without due regard for economic developments in the world in general, and in particular the attitude of the Western Community to which Turkey belongs. The development effort of Turkey must be evaluted against the external background, and the economic policy to be followed must be established within this perspective.

Some important indicators that may help to determine from a static view, the position of Turkey in the community it belongs to, are given in Table 22. The comparisons show that Turkey is far behind the economic status of the countries with which it cooperates.

Looking at the problem from a dynamic angle, it is evident that the rate of growth of the Turkish economy is lower than that of all the other European countries (Table 23)

The prospects for the future are no brighter than the present situation and demonstrate again the importance and the difficulty of the development problems of Turkey. The developed nations are engaged in a race to raise their standards of living. OECD countries are aiming at increasing their incomes by fifty percent in the coming ten years. All the under developed countries are trying their utmost to better the living conditions of their people. In a perspective of this kind the failure of Turkey with its rapidly increasing population, to achieve economic development will give rise to many problems which in the future will be increasingly difficult to solve in the future. The bitter problems of economic dissatisfaction have already begun to appear. The **gecekondu** (shacks) problem of housing following rapid urbanization and unemployment are already serious issues.

One of the characteristics of our age, in which the nations have entered a fierce race for economic development, is the emergence of the idea of international cooperation in assisting the developing countries. After the Second World War the fact that economic factors were responsible to a considerable extent for international conflicts and that sound solutions to development problems were the prerequisite to world peace was fully realized.

Studies on the problems of underdeveloped countries have opened new horizons. It is now generally admitted that there is a necessity for achieving fundamental changes in the economies of the underdeveloped countries rather than working towards an international division of labour based on the present static conditions. It is no longer believed that foreign trade will provide the necessary stimulus for development in the sense of the 19th century experience, even if trade restrictions did not exist. Although this is not an argument contradicting the case for international specialization, it points to the fact that underdeveloped countries are in need of an extra effort. It is also conceded that the underdeveloped countries are not in a position to achieve this effort with their own means alone. Because of these considerations, assistance to underdeveloped by developed countries is on the way to being accepted as a principle of international diplomacy. With the spread of the belief that aid to underdeveloped countries is a prerequisite to peaceful world, one can expect a rapid evolution of ideas in this directon.

There is also improvement in another direction. The difference between recovery efforts of the countries destroyed in war and the development efforts of newly developing countries is being more and more appreciated. This had led to the view that foreign aid

TABLE 22 — Economic and Social Indicators in Turkey and Some Other Countries

1957 and the nearest year	per capita GNP in dollars 1958-59	FOOD (per capita) Calories	FOOD (per capita) Protein Gr.	HOUSING (persons per room	HEALTH Crude death rate (per thousand)	HEALTH Child death rate (per thousand)	HEALTH Number of doctors per 1000 inhabitants per	Power consumption kwh. head)	Steel consumption (kg. per head)	Rate of illiteracy %	Ratio of children attending primary school to children of primary school age	Ratio of children attending secondary school to children of secondary school age
Turkey	185	2 660	85	2.52	12.5	165.0	2.6	255	12.0	61	40.4	3.3
U. S. A.	2 717	3 100	94	—	9.6	26.4	12.1	7 771	568.0	2	89.7	64.3
W. Germany	1 051	2 990	81	1.03	11.3	36.4	13.0	3 488	393.0	1	68.4	18.2
France	1 178	2 920	103	1.01	12.1	33.7	10.0	2 505	302.0	3	79.6	25.0
United Kingdom	1 236	3 290	86	0.78	11.5	23.9	5.3	4 775	372.0	—	96.5	16.8
Italy	601	2 580	74	1.27	10.0	50.0	14.0	878	139.0	13	54.7	9.8
Yugoslavia	—	2 650	83	2.33	10.6	101.5	6.9	710	62.0	—	—	—
Greece	355	2 650	85	1.79	7.6	44.1	10.0	351	33.0	26	67.0	9.3

TABLE 23 — Comparison of Indices of GNP per Capita (1953 = 100)

COUNTRIES	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
Netherlands	91	92	93	100	106	113	116	117	117	122	130
Belgium	93	97	97	100	103	107	110	112	110	112	116
Luxembourg	—	—	99	100	99	102	107	110	111	111	116
France	91	96	98	100	104	109	114	119	120	121	128
Italy	86	91	93	100	105	111	115	122	126	135	144
W Germany	80	92	93	100	106	113	116	117	117	122	130
Common Market Countries (Average)	87	92	95	100	105	112	117	122	125	129	136
Austria	88	97	97	100	110	122	129	136	140	144	155
Denmark	95	94	95	100	102	101	103	108	111	116	123
Switzerland	91	95	96	100	107	112	117	120	120	125	131
Norway	92	94	97	100	103	105	109	110	109	112	118
Portugal	92	95	94	100	104	108	111	115	116	121	124
Sweden	96	95	94	100	105	108	109	111	111	114	118
United Kingdom	95	97	96	100	105	108	109	111	111	114	118
European Free Trade Area Countries (Average)	90	94	96	100	104	110	113	117	119	123	129
Greece	81	90	88	100	104	111	118	128	131	135	141
Turkey	79	88	93	100	89	93	96	100	102	103	104

will in time make it possible to create dynamic elements in the structure of underdeveloped economies.

This realization has necessitated a search for new procedures and formulas for development credits. The first step in this direction has been taken with the establishment of new national and international credit institutions.

It is essential to coordinate international cooperation for the development of the underdeveloped countries with the foreign trade policies of the developed countries. It is obvious that aid is never a substitute for trade. Particular consideration must be given to the effects on the developing countries when establishing customs unions, and common markets. It is apparent that there is a changed understanding in this respect consistent with the realities of international cooperation.

SECTION II

15-YEAR TARGETS OF PLANNED DEVELOPMENT

THE NEED FOR PERSPECTIVE PLANNING

As an underdeveloped country, Turkey can progress towards a high standard of living only by sustained efforts within a systematic and long-term framework. In order to achieve this, it is necessary to look at the targets, and at the resources and means available for attaining these targets in a long-term perspective and keep them in mind in framing development plans.

Long-term perspective brings out the main directions in which the economy and the social structure can develop. In the short-term plans which will be prepared within this framework, a balance will be established between the plan targets and the available means and resources, and the work to be done will be programmed according to priorities. The means of implementation will also be specified in more detail in the annual plans.

The perspective plan insures the integrity and continuity of the annual plans and, by preventing wrong decisions, facilitates the achievement of the fundamental targets in the most expeditious way without waste of resources.

Turkey's First Five-Year Plan is the first stage of a 15-year perspective plan. In preparing this plan, the social and economic targets aimed at the necessary resources that must be mobilized have been considered in a perspective of fifteen years. Because of this, in determining the social targets and priorities among these targets, and in preparing sector programs, the results expected at the end of fifteen years have been kept in mind.

The targets to be reached in fifteen years may be summarized as follows: training sufficient numbers of high level scientific and technical personnel in every field as required for Turkey's development; achieving a 7 per cent rate of growth; solving the employment problem; reaching a balance in external payments and realizing these targets according to the principles of social justice.

It must be pointed out that there can be some differences between the long-term targets and the five-year plans, which may, at first sight, look like contradictions. For example, the first five year period of a plan that aims in the long run at bringing the foreign balance into equilibrium may necessitate a greater deficit. In the same manner, it is obvious that the solution of all social problems in a short term plan period and the attainment at the same time of a high rate of growth are incompatible ends. The ultimate objective is to find solutions to social problems and to raise the general level of welfare. Yet, to direct all the available resources to this end at the start would delay the achievement of the goal. The important thing is to increase the availabilty of resources in order to achieve the long term targets. It is therefore necessary to make certain sacrifices in the short term, and to reconcile the targets within the framework of the perpective plan. The fundamental purpose is to achieve equilibrium among the objectives of social justice, employment and balance of payments at a high income level.

ECONOMIC AND SOCIAL TARGETS

Calculated at 1961 prices and assuming a growth rate of 7 per cent, gross national product will rise from TL. 52.7 billion in 1962, to TL. 145.3 billion at the end of fifteen years. This represents a 175 per cent rise in national income.

But the effect on the welfare of the individual of increases in GNP depends on the rate of population increase. The population of Turkey has been rising at the very high rate of 3 per cent per annum. If this rate of increase continues, income per capita will rise by only 4 per cent per annum. Accordingly, per capita GNP, which is 1790 TL. at present, will rise to 2190 TL. in 1967 and 3200 T.L. in 1977. As against a rise of 175 per cent in GNP, per capita income during the same period will have risen by 78 per cent. GNP will double in ten years whereas it will be necessary to wait until 1980 in order to have a 100 per cent increase in per capita income.

If the very low living standards of the masses in Turkey and the urge of the people to raise their level of wellbeing are taken into consideration, it will be seen that a 4 per cent increase in per capita income is far from being enough. The target of the OED countries in the coming ten years is a 3.3 per cent annual increase in per capita income. *

This situation clearly shows the importance of the population problem. Although our resources will be reexamined and the possibility of a higher rate of development will be considered at the end of the five-year period, it is evident that not only the achievement of a higher standard of living, but also the speeding up of growth depends on slowing down the population increase. The consumption requirements of the increasing population are one of the the chief factors limiting the resources which can be allocated to investment.

The population problem also appears to be a very important issue from the viewpoint of employment. The employment problem springs from the relationship between the labour supply determined by population increase and labour demand created by economic activity. Finding employment for the labour supply accumulated as a result of the rapid population increase in the recent past is one of the main problems that requires attention in the coming years. Population policy will not have direct bearing on the issue of employment in the coming period, because any measures

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* The 3.3 part of the 4 per cent increase in per capita income adopted in the Five Year Plan will only help to keep the relative positions of Turkey and the OECD countries unchanged. At the rate of such a low differential of 7 per thousand, the difference will disappear only after very many years.

adopted now will only begin to affect the labour supply in 15 years. Therefore, the employment problem must be considered in a longer range perspective. The fact that we are living in an era of rapid technological development and that the improvements in productive techniques seem to be of a labour saving nature aggravates the seriousness of the population problem. All these factors point to the necessity of taking some policy decisions today in order to slow down the future population increase.

The imbalance created as a result of rapid population increase in the past and inadequate employment opportunities in agriculture and other sectors have brought forth a serious disguised unemployment problem in agriculture. This in turn has encouraged urbanization, as a result of which unemployment has been transferred to the other sectors as well. This is one of the main reasons why Turkey should aim at the high rate of growth. It will be necessary to create jobs for 7.5 million people in 15 years in addition to the one million known disguised unemployed in agriculture even at the peak season. The employment possibilities which will be created by the achievement of the investment and production targets and the realization of the growth rate (which is somewhat high considering the domestic and external resources) will not entirely solve the problem unless other special measures are adopted. The total additional employment that the investment and production targets of the plan will provide ise 6.8 millions.

For the reasons mentioned above special measures are suggested in the plan in order to solve the employment problem. The main principle underlying these measures, as discussed widely in the relevant parts of the plan, is to keep migration to the cities on a level with the new jobs to be created there and to prepare programmes that will encourage non-agricultural activities in rural areas. This should contribute toward eliminating over unemployment with its high economic and social costs.

The concrete effects of development will mainly be observed in consumption expenditures. The average increase in private consumption expenditures during the First Five Year Plan has been set at 5.4 per cent per annum. As the population increase is 3 per cent, per capita consumption will rise annualy by 2.4 per cent on the average. In the last ten years per capita private consumption has increased by 2.9 per cent. But this high average is due to the abnormal jump in agricultural output during the period 1950 - 1955. It dropped to 2.1 per cent during the following 5 year period. Even in the First Five Year Plan there will be a relative increase in the annual rate of per capita private consumption. The efforts to achieve a 7 per cent rate of growt do not, however, permit a high increase in consumption in the first period. The ratio of private consumption expenditures to GNP will fall from 73.2 per cent in 1962 to 67.9 per cent in 1967. This is the result of an effort to raise investments from 16.3 per cent of GNP in 1962 to 19.4 per cent in 1967 and current public expenditures from 14.4 per cent to 15.5 per cent in the same interval. Moreover, as the ratio of the external deficit will fall from 4 per cent to 2.8 per cent of GNP, it will be necessary to finance a higher portion of investment through domestic savings.

The first five year period is an important step in the development effort. To increase investment activities, on the one hand, and to finance an increasing proportion of this investment through domestic saving, on the other hand, will be possible, only by keeping consumption expenditures within certain limits.

The development of the Turkish economy after the first five year period will permit a higher rate of increase in consumption expenditures, because at the end of the first five year period investment will have risen to the desired level of 19.4 per cent of GNP. Although it is not possible to guess the capital - output ratio for the long period with any degree of accuracy, it is possible that this coefficient will be around 3.

Under these conditions, after the first five years it will be necessary to allocate 21 per cent of GNP to investment in order to obtain a 7 per cent. increase per annum. Current public expenditures will also have risen to the desired level expressed as a per cent of GNP by the end of the first five year period. Since it is necessary to increase expenditures on education, health and research (which contribute to economic development) by as much as 15.1 per cent in the first five years, public expenditures will rise from 14.4 per cent of GNP in 1962 to 15.5 per cent in 1967. In other words, public expenditures will rise at the rate of 8.7 per cent perannum. Current public expenditures will reach their optimum level at the end of the first five years, and will reach the level of 16 per cent at the end of the 15 - year period.

If it is assumed that investment will be 21 per cent and public expenditures 16 per cent of GNP, and that the foreign payments deficit will disappear at the end of the 15 - year period, consumption expenditures will constitute 63 per cent of GNP. In other words, consumption expenditures will rise from 50.2 billion liras in 1967 to 91.5 billion in 1977. Accordingly the average annual rate of increase is 6.3 per cent So long as the population increases at the rate of 3 per cent per annum, consumption will increase by 3.3 per cent.

The increase in annual per capita expenditures during the First Five Year Plan will be 2.4 on the average, and in the following 10 years it will be 3.3 per cent. The average of the 15 - year period is 3 per cent per annum. Through adjustments in the distribution of income, this increase in consumption expenditures will permit substantial improvements in wages without creating inflationary tendencies.

Per capita income and consumption expenditures are not the only indicators of individual welfare. The distribution of income is also an important factor affecting the welfare of individuals. One of the targets is to achieve a fair distribution of income. The taxation measures to be adopted will distribute the burden of development on a more equitable basis and will also serve the purposes of social justice.

In addition to these, the needs of the masses have been given priority in the allocation of investments and public expenditures. In choosing production targets, wage goods used by low income people are given priority. Similarly, modest dwellings to meet the requirements of the masses are given preference in the investments in housing. In this way, the housing needs of the country during the 15 year period will be satisfied to a considerable degree.

In view of their effect on income distribution the fields where public services are concentrated and the principles to be applied in distributing these services between social groups and regions will be given utmost attention.

The fields where social services are concentrated are education and health, which have a significant bearing on social welfare. The principle adopted in distributing these services is to achieve equality both between groups and betweenn regions in providing these services. It is expected that expenditures for these services will affect the welfare of individuals in a cumulative manner.

Another subject to pay attention to with respect to its effect on income distribution is the establishment of an extensive social security system. In the coming fifteen years the scattered and limited social insurance systems that exist at present will be unified and gradually expanded to form a comprehensive social security system.

Targets in education, one of the fundamental elements of human welfare, are to raise education standards, train individuals in conformity with the needs and conditions of the Turkish society, and enable individuals to take advantage of educational opportunities according to their abilities. To select according to ability and to offer opportunities to the most capable is in accordance with the principles of social justice and will, at the same time, assure a social structure in which the society is governed by the most qualified people.

Within fifteen years all children of primary school age will have the possibility of attending school.

Within fifteen years an important transformation will have taken place in our *social* structure through education. Technical personnel which now numbers 150 thousand, will have increased to 470 thousand, secondary education level professional and technical personnel now numbering about 150 thousand will have risen to 550 thousand, and lower level professional and technical personnel now numbering about 1.25 million will have risen to 4.5 million. Thus, there will be 3.6 times as many trained people in the society as there are now. This change will also assure a balanced distribution of trained manpower among the various echelons and will remedy present imbalances. For example, at present there are 1.7 mechanics for every engineer and one assistant to every high level health worker. Both these ratios will improve to 2.6 at the end of fifteen years.

At the end of fifteen years the number of students in primary school will have risen by 102 per cent, in secondary education by 78 per cent, in general higher education by 180 per cent, and in higher technical education by 740 per cent. The ratio of students receiving a liberal education to the total number of students is 65 per cent and the ratio of these following professional and technical courses is 35 per cent. At the end of fifteen years these ratios will change to 58 per cent for professional and technical schools and 42 per cent for liberal education.

In health services the goal is to raise the level of health by improving environmental sanitation, and educating people in public health matters, better nutrition, family planning and control of epidemics. In health programmes, more emphasis will be given to a system of treatment at home or in outpatient wards than to hospital treatment, which is more costly and less effective. Hospital treatment will be considered as a supplementary element in this system.

In 15 years the number of high level health personnel will be 2.5 times the present number and the number of auxiliary personnel will be 6 times the present number.

In order to reach these targets, public health expenditures will be doubled in 15 years.

These 15 - year targets are based on the principle of balanced growth in agriculture and industry. Long - term development will be achieved predominantly through industrialization. However, the industrial sector can only develop if there are substantial advances in the agricultural sector. Investment in agriculture will lead to a doubling of agricultural income by 1975. The following table shows GNP and agricultural product in 1962, 1967 and 1977.

TABLE 24 — Estimates of GNP and Agricultural Product

Years	GNP (TL. Billion)	Agricultural Product (TL. Billion)	Agricultural Product (as % of GNP	Agricultural Product Per Capita (TL.)	Agricultural Product per Capita of Rural population (TL.)	Agricultural Product per-capita of Active Rural population (TL.)
1962	52.7	23.1	43.8	785	1 100	2 400
1967	73.9	28.3	38.3	838	1 300	2 700
1977	145.3	42.7	29.4	941	1 900	3 800

Agricultural product per capita will rise from 785 liras in 1962 to 838 liras in 1967 and to 941 liras in 1977. The share of the agricultural product in national income will fall from 43.8 per cent in 1962 to 38.3 per cent in 1967 and to 29.4 in 1977. These percentages are not only significant in showing the direction of future development in Turkey, but are also in line with the experience of other countries.

Changes in the distribution of the active population among the main sectors of the economy during the fifteen years also show a similar trend.

TABLE 25 — Distribution of Active Population Among the Sectors

(per cent)

Sectors	1962	1967	1977
Agriculture	77.4	71.1	58.1
Industry	9.8	11.9	15.6
Services	12.8	17.0	26.3

Active population in agriculture will fall from 77.4 per cent to 58.1 per cent of total active population in fifteen years, and the share of the active population in Industry will from 9.8 per cent to 15.6 per cent of the total. The share of services will rise from 12.8 per cent to 26.3 per cent.

Preliminary estimates of production targets for other sectors are given below.

TABLE 26 — Some Production Targets

	1962	1967	1977	Unit
Transportation	18.6	29.2	45.6	Ton/Passenger Km.
Irrigation	1 000	1 500	3 000	Thousand hectares
Energy	19.8	27	43	Million tons of coal
Petroleum	3 314.8	4 780	9 955	Thousand tons
Cement	2 150	3 593	6 350	Thousand tons
Iron - Steel	560	885	1 600	Thousand tons
Artificial Fertilizers	325	1 263	2 843	Thousand tons
Cotton fibres	128	160	250	Thousand tons
Wool fibres	36	40	48	Thousand tons
Artificial fibres	4	6	13	Thousand tons
Paper	101	140	200	Thousand tons

These targets show only the directions of advance in these fields and will be corrected as a result of technical investigations to be conducted in the future.

One of the objectives to be achieved in the long run is a gradual diminution of Turkey's balance of payments deficit and the realization of a self-sustaining economy. However, it is hoped that new fields will attract foreign capital and that Turkey will continue to benefit from normal external finance possibilities. In other words, it is probable that Turkey will continue to be a capital importing country within the context of normal capital movements for a period exceeding fifteen years. But, with improvements in this direction, Turkey may reach a stage before the end of fifteen years and probably at the end of the second five-years when she can continue her development efforts without being in need of exceptional external finance such as foreign aid.

The fundamental principle of Turkish foreign trade policy is to make the most of the possibilities offered by international specialization and cooperation. But it would be wrong to base our foreign policy on the present comparative cost structure. In choosing investment priorities, cost comparisons have been evaluated in a long term perpective and the development targets of the sectors have been determined with respect to a dynamic comparative cost analysis.

To be able to make the best use of the international division of labor, Turkey will have to make a great effort to expand exports in the coming fifteen years. But it is not possible to expect much in the short run from efforts to promote exports. The effect on costs of the balanced investments of the first five years, the results of investments in export industries and, especially, the effects of the measures to improve organization, will be felt primarily only after the first five years.

The export policy will be in the direction of diversifying export goods which, up to now, have been confined to a few traditional items. With this purpose in mind, priority will be given to promoting the export of manufactured goods. The abundance of labor will provide a comparative advantage for Turkey in labor intensive goods.

The ways and means of exploiting this advantage, to the extent the foreign trade policy of the industrialized nations permits, will be investigated. Special attention will be paid to promoting the export of processed products of the soil and the sea.

The infrastructure and tourism investments to be made in first five years and the expansion of the commercial fleet will produce a rapid rise in invisible revenues, especially after the second five years.

On the other hand, the effect of investments in import substitutes will be felt during the first five years. During this period the possibilities of import substitutes will have been largely exploited. In trying to produce substitutes for imports, a comparative cost structure has again been kept in mind and priorities have been set with a view to establishing equilibrium at a high volume of trade.

The changes that will take place in our foreign trade can be summarized as follows : Promotion and diversification of exports, increase of revenue from invisible items and especially from tourism, and a change in pattern of imports.

The changes of achieving export objectives and balancing payments at a high volume is closely related to the foreign trade policies of the advanced countries. In the event that these advanced nations follow a protectionist policy toward the developing countries, Turkey may have to favour a policy giving priority to import substitutes and the manufacture of the necessary producer goods within the country.

ECONOMIC TARGETS

The basic economic decisions in the plan relate to the division of total resources between saving and consumption and the allocation of investment among the various sectors.

These decisions are consistent with the principles of an economic policy that aims at achieving a 7 per cent annual growth rate without disrupting the equiliorium of the economy

INVESTMENT - SAVINGS EQUILIBRIUM AND THE GENERAL PRICE LEVEL

The general economic target of the Plan isc to assure, on the average, a 7 per cent annual growth in national income. This growth rate is based on realistic estimates of the resources of the Turkish economy and the possibilities of mobilizing these resources. It has been estimated that the necessary savings from domestic sources can be secured without extreme hardships and burdens. The foreign aid needed for supplementing these domestic savings has also been calculated. With these sources of revenue, the desired level and composition of investment have been determined. It will be possible to achieve the target rate of growth under conditions of stability by implementing the necessary policy measures.

Fiscal and monetary policies will prevent the inflationary or deflationary tendencies that could distort full employment or the optimum allocation of resources. Public investments will be financed through taxes, fees, surpluses of the public enterprises and funds secured from external sources. The necessary and feasible reorganization measures will be taken in order to assure additional domestic resources.

Money and credit policies will be determined in such a way as to make possible the financing of private sector investments through the savings of individuals and institutions Investment estimates for the private sector are based on the savings - creating capacity of this sector. A greater effort than in former years is expected of the private sector and it is assumed that this is possible if certain measures of encouragement are taken within a stable economic order.

The flexibility and mobility that the economy will need at a rising level of economic activity will be secured through some alterations in the structure of monetary and banking institutions.

COMMODITY BALANCES AND RELATIVE PRICES

In fixing production targets and preparing sector programmes, the accepted principle has been that prices will be determined according to the rules of the market. Price controls will be avoided as much as possible; in determining prices in the public sector, costs will be taken into consideration and efforts will be made to assure that prices are in line with market values.

In a developing economy the market mechanism cannot of itself be expected the create the commidity balances at the level and time desired. Disequilibrium between the supply and demand of certain commodities may create bottlenecks in the economy and distort price relationships. It is normal to expect a rise in the price of goods that become scarce. But if these goods are basic producer goods or necessities, the resulting difficulties may prevent the economy from reaching the planned targets. Since production capacity is small in an underdeveloped country, the available resources must be used in the most efficient way; the cost to the economy of excess capacity is very high.

The main reason for preferring a planned economy is to establish a balance in allocating reources; this the market economy cannot always succeed in establishing. The plan will help the development of productive capacity according to the pattern of internal and external demand. Production targets and priorities based on projections of final and intermediate demand have determined the allocation of investments among sectors. Thus, a production structure is aimed at which will be in line with domestic and external demand. Bottlenecks which may arise in the short run will be eliminated by making efficient use of import and export possibilities.

In order to collect technical data about the structure of the economy, the following studies have been made which check and complement each other : input-output study, sector studies, pre-project analyses and final demand projections. As a result of these investigations basic data on the composition of internal and external demand for various categories of goods and services and on productive resources and their sectoral distribution has been collected; intermediate demand has been determined on the basis of inter-sectoral relationships.

By making realistic estimates about autonomous development potentialities, shortages or surpluses of producer or intermediate goods likely to arise unless necessary measures **taken are calculated** Realistic estimates of the self-sustained growth possibilities of sectors helped to determine the shortages and surpluses likely to occur in the supply of producer and intermediate goods unless the necessary steps were taken. In determining the distribution of investments and analyzing projects, bottlenecks that might occur in the supply of basic goods and services have been given careful attention.

PRODUCER GOODS

In determining developments in the sectors and in selecting new projects the additional demand for producer goods that will be forthcoming during both the construction and the operation phase has been carefully examined. It has been estimated that, as a result of speeding up investments and increasing production, there will be important increases in the demand for capital goods (machinery and equipment), some raw materials, skilled manpower and the complementary basic services. The fact the supply elasticities of these goods are low may create bottlenecks for the whole economy, and the immobility of some factors may give rise to regional bottlenecks.

To meet the additional demand for producer goods, new projects, complementary investments to make better use of existing capacity and measures of reorganization will play an important part. In spite of this, it will not be possible to meet the demand for some important producer to satisfy domestic sources. The development of production capacity to satisfy domestic demand is a problem that can only be solved in the long run. Therefore, the gap between the demand for and the supply of produces goods in the short run will only be closed by making rational use of import possibilities afforted by export earnings and other means.

Shortage problems connected with skilled manpower and complementary basic services are not easily overcome by imports. The bottlenecks arising from insufficient skilled manpower will, in the short run, be overcome by using available personnel in a more rational manner. The low level of infrastructure investments in fields such as power and transportation or the unbalanced distribution of these investments may cause general or regional bottlenecks. In order to prevent such imbalances, emphasis has been given to complementary social overhead investments and to their regional distribution.

CONSUMLER GOODS

In a developing country, consumption expenditures have a strong propensity to increase. This is due to the increase in employment, rise in incomes and the urge of the people for a better standard of living. Although an important part of the increase in income will be devoted to investment expenditures, an increase of 5.4 per cent per annum on the average is expected in consumption expenditures during the plan period. Investments initiated in the past which will start yielding production during the plan period will help to reduce the additional pressure on consumption goods. In selecting projects efforts are being made to assure an optimum combination of short and long-term investments in order to provide an increase in the output of consumer goods consistent with the growth of demand. Thus, each year a certain volume of investment projects will be completed and will help to satisfy additional demand.

In the sector programs, a balance is established between total consumption expenditures and the total output of consumer goods, and where possible and necessary, separate projections have been made for individual commodities. But, as private enterprise is dominant in the production of consumer goods, it is neither possible nor necessary to try to establish supply and demand equilibrium for every commodity by regulating production. Failure to meet production targets may lead to rises in the prices of these goods, and vice versa. Adjustments in the supply and demand of these goods, will be through the price mechanism, but important price movements in wage goods will be prevented. Total population increase, increase in the active population and urbanization will create additional demand for wage goods. If the production of these goods does not increase in the same proportion, a situation contrary to the social targets of the plan may arise. In preparing the plan, emphasis was put on the supply of the necessary food and clothing and inexpensive housing and the appropriate measures were adopted to achieve an equilibrium between the supply of and demand for these items.

Priorty was given to investments in agriculture to increase the necessary food supplies. It is expected that the increase in the supply of these goods will be sufficient to meet the increase in demand. As a rising proportion of the population will move out of agriculture, it is necessary to bring the agricultural sector more in the market economy in order to prevent bottlenecks in food supplies and regional price differences. The development of transportation facilities between villages and markets and the establishment of sales cooperatives have been considered in the plan. Stocks of agricultural produce will be built up in order to meet emergencies, since big fluctuations can be expected in agricultural production.

Available capacity is adequate to satisfy additional demand for cheap clothing. In order to increase the supply of inexpensive housing in cities, investment will be directed towards social housing which will shelter more people. This will be done through taxation, credit and other measures.

The physical balance in basic goods and services outlined above will prevent relative price changes that are contrary to the plan targets or not in accordance with the priorities set in the plan. Price imbalances may arise in spite of physical equilibrium if there are regional bottlenecks or monopolistic situations. Measures will be adopted to prevent this. In making the necessary adjustments in the price of basic goods and in setting the prices of public services, the effect of such prices on incomes, costs and other prices will be taken into consideration.

SOCIAL TARGETS OF THE DEVELOPMENT POLICY

FUNDAMENTAL PRINCIPLES AND METHODS

The economic devolepment of Turkey, as stated in the Plan Strategy, will follow a course compatible with the principles of social justice. The most important principles governing development targets are the attainment of an adequate standard of living for the people, social security, a fair distribution of income and equality of opportunity in the widest sense of the term. In other words the basic concept of development is to provide as large a proportion of the population as possible with higher standards of living and with social security.

Since the full realization of the social objectives will extend beyond the limits of the First Five Year Plan, the means to be used in order to reach the targets must first be considered in the context of a 15 - year perspective. But measures to be taken in this direction will show results only in the long run. Priority should therefore be given to the implementation in the First Five Year Plan of the measures necessary for the attainment of these long-term objectives. In the short run conflic may arise between the economic and social objestives to be realized in the long run. For example, if the attainment of the highest rate of growth in national income is considered to be the only goal of development policy, and if, due to this development produces greater inequalities in incomes, this may seriously obstruct the attainment of the employment objective and the objective of raising the general standard of living. On the other hand, if the social objectives are the only targets considered and if excessive social security measures and redistributive policies are emphasized, then the reources that will directly increase productivity and help economic growth may be halted before it even starts.

One of the most important problems in achieving balanced growth is to reconcile social and economic objectives which seem to be in conflict in the short run by assigning appropriate weights to the measures necessary for their implementation; the conflicting aspects of the two basic objectives can thus be minimized and the complementary aspects maximized.

Tax reforms aimed at raising income and production at the desired speed may be formulated in such a way as to be compatible with the creation of wide employment opportunities, social mobility, and social justice objectives. These can complement each other as well. In the same way, large public expenditures on such services as education, health, and social security may contribute to the attainment of economic objectives through their productivity-increasing effect as much as they contribute to the achievement of such social objectives as fair distribution of income.

In the development effort, the measures entailed by social and economic objectives must be reconciled. The more this is achieved, the more chance there will be of achieving a harmonious development.

The realization of the social objectives of development will permit the attainment of two important balances which form the basis of the social aims. The first of these is balance between individual incomes and the second is balance between regions. By establishing these balances, social justice will be achieved both between idividuals and between regions with respect to sharing the burdens and the benefits of development.

SOCIAL JUSTICE EQUILIBRIUM BETWEEN INCOME GROUPS

The question of social justice equilibrium between income groups has been examine by taking into consideration both the size of income and its distribution among the groups which derive their incomes from labor, rent, capital or enterprise. The method has been used because, in Turkey, a classification to be made on the basis of the size of incomes would produce almost similar results to those obtained through a classification made by sources of income. In other words, the individuals in each income group obtain their incomes from more or less the same source.

In planning social justice measures in connection with the distribution of income, it is worthwhile to examine the past and the present situation. For this purpose the period 1950 - 1960 was examined and analysed. This analysis revealed the changes that took place in the average income, at constant prices, of individuals comprised in various income groups, and disclosed the relation between these changes and the increases recorded in average living standards.

The analysis conducted revealed that, after deducting personal taxes, the average income, at 1950 prices of the officials and employees working in the public sector, was 9 per cent higher in 1960 than in 1950. As the rate of increase in actual individual income represents the increase in living standards, provided that other conditions are the same, the analysis conducted reveals an increase of 9 per cent in the living standards of this group in 1950 - 1960. In the same period per capita GNP at 1950 prices registered an increase of 38.6 per cent. This ratio represents the average increase in living standards in 1950 - 1960. The 9 per cent increase in the living stanadrds of the officials and employees working in the public sector, against 38.6 per cent increase in the average standard of living figure for the country indicates that the income distribution share of those working in the public sector had declined by 22 per cent at the end of the period under study.

When the comparison is conducted by taking into consideration the average figure for the period, instead of the figures for the beginning and end of the period, it will be observed that the average income, at 1950 prices and after deducting personal taxes, of those working in the public sector registered an increase of 13 per cent against an increase of 27 per cent in per capita GNP. This comparison reveals a decline of 12 per cent in the income distribution share of those working in the public sector. As may be observed above, the share in the distribution of income of those working in the public sector is less, at the end of the period, than the average income share for the for the period. This fact indicates a declining trend in the income share of those working in the public sector.

A similar analysis carried out in connection with the workers subject to the Workers Insurance Scheme disclosed an average decline of 10 per cent in the per capita share of workers in GNP during the period 1950 - 1960. According to the results obtained, the workers also lost a portion of their share in the distribution of income during the period under study. Their loss, however, was less than that suffered by the officials and employees working in the public sector. The rate of loss between the beginning and the end of the period is almost equal to the average loss recorded during the period. This situation may be attrtibuted to two structural changes of major impontance that took place during the second half of the period. The first of these changes was the increase in the number of the qualified technical personnel employed by the public sector who were subject to the Workers Insurance Scheme. The second change was the hundred per cent increase in the level of minimum wages, towards the end of the period. These changes caused the share of income of the workers to be at almost the same level at the end of the period, although a fall had been observed prior to the middle of the period. Many people who cannot be observed prior to the middle of the period. Many people who cannot be considered workers were included in the total number of workers and consequently the total amount of workers' income was inflated unjustifiably. If this error is corrected, it will be observed that the income of workers also continued to decline during the second half of the period under study, and that the rate of decline was more than 10 per cent.

In conclusion it may be said that the increase in the living standards of the employees and workers other than those occupied in the agricultural sector did not follow the trend recorded by the average increase in standards of living in general, and that, with the exception of certain fluctuations, the per capita income share of the said employees and workers followed a constantly declining course during the period. The wage and salary increases made in this period, could not change this declining trend.

A similar examination carried out in connection with the income earned by the agricultural sector revealed that the average increase in per capita agricultural income, at 1950 prices, was below the increase recorded in per capita GNP at the same prices. The average loss in the per capita income of those working in the agricultural sector amounted to 7 per cent of their income. This examination indicates that these working in the agricultural sector were in a better position as to the distribution of income than the public sector officials and employees and the workers subject to the Workers' Insurance Scheme.

However, distribution of income within the agricultural sector is less equitable than the distribution in the other two income groups. This may be attributed to the fact that agricultural incomes originate from two main sources; income from labor and income from land ownership. An examination conducted on the assumption that no significant changes took place in the land ownership pattern after 1952, disclosed the fact that 48 per cent of total agricultural income is earned by 90 per cent of the people working in this sector, while the remaining 52 per cent is in the hands of only 10 per cent of farmers in the high income category. These rations reveal that distribution of income among the farmers is much less equal than that amoungst government officials and employees.

Land owners in the agricultural sector are included in high income the group while agricultural laborers and sharecroppers are included in the low income group. The income received by those within the high income group is chiefly derived from real estate. On the other hand, the income of those within the low income group is earned by labor. Therefore, the trends followed by the distribution of agricultural income which comprises different kinds of income would not reflect the average trend of agricultural income in the per capita distribution of GNP.

The best index for income from land may be the average sale price of land suitable for farming. The indices showing the average sale price, at 1950 prices, of various land during the period 1950 - 1960, followed almost the same trend as the one recorded by the indices representing the average increase in per capita GNP at 1950 prices. The ratio between the price index representing land sales, at constant prices, and the index representing per capita GNP, at constant prices, was 100.2 during the period under study. Thus, it may be said that income from land which followed land sale prices, and GNP increased at the same rate. This conclusion reveals that the share in income distribution of income from land which represents the high income group in the agricultural sector, did not decline during 1950 - 1960. As the share of the land owners did not decline, the decline in the per capita share, at 1950 prices, of agricultural income reveals that the rate of decline in the share of income earned by farm labor was higher than the rate of average decline recorded in agricultural income as a whole. This situation may be put right by eliminating disguised unemployment and by protecting the rights of agricultural workers.

The income of an important group in the agricultural sector, on the other hand, is derived partly from land ownership and partly from labor. When the share of income earned by labor within total agricultural income increases, and that of income from land ownership falls, both the total income of the farmer and the actual increase recorded in his income during 1950 - 1960 will decline in direct proportion to the fall stated above.

In conclusion, it may be said that, when the incomes, at 1950 prices and excluding personal taxes, of individuals in the agricultural sector as well as of the government officials, employees, and workers in the other sectors, are taken into consideration, the increase in their living standards was below the level of increase recorded in the general living standards of the country and, consequently, the per capia share of this group within the distribution of income steadily declined during the period 1950 - 1960.

Indirect taxes have not been taken into consideration in the above analysis. Due to its nature, the burden of indirect taxation is almost equally distributed among the large mass of people, without differentiating between income levels. During the period 1950 - 1960, the increases observed in indirect taxes, including net Monopoly proceeds, and in GNP were almost at the same rate. The ratio of increase in indirect taxation to increase in GNP was 101.6. The rate of increase in the income of earned income recipients who represent the majority of the population was below the rate of increase recorded in GNP. Therefore, the increase in their living standards, the level of which may be determined on the basis of goods they are able to consume is probably below the level indicated above.

According to the calculations made, the rates of increase of total government revenue and of GNP continued to be almost the same during the period under study. Therefore, as the rate of increase in the income of earned income recipients was below that of GNP, and further, as the rate of increase in incomes of agricultural land owners and in State revenues was roughly at the same level as that of GNP, the per capita income of individuals earnings an income derived from capital and real estate must have increased at a higher rate than GNP. The increase of GNP at a higher rate than that of earned income could only have come about in this way. As a matter of fact, the average per capita increase in the incomes of real estate owners at 1950 prices, was 8 per cent above the average per capita increase in GNP. Even the fixed rent policy followed during the period 1950 - 1960 could not prevent this increase.

In conclusion it may be said that the share in the distribution of income of government officials and employees as well as of industrial and agricultural workers followed a declining trend, against an increase in the share of those receiving an income from capital, enterprise and real estate. This trend still continues at present.

One of the social justice targets of the plan is to eliminate these disparities and to create a more equitable trend for the distribution of income.

This target may be realized through the determination and elimination of the factors causing existing income disparities. The present situation, which is not compatible with the principles of social justice, may be attributed to the following two causes :

First, the inflationary policy followed during 1950 - 1960 and secondly, direct taxation.

The obvious influence of inflation on fixed income recipients prevented a real increase in earned incomes and consequently real increases in these types of income have been very slow.

The deficiencies in the Turkish system of taxation have caused a higher rate of increase in the incomes derived from capital and real estate than in incomes from salaries and wages The average sale price of land suitable for farming increased by 360 per cent during the period 1950 - 1959 while total land taxes increased by only 147 per cent during the same period. The 147 per cent increase recorded in tax collections was caused by the expansion of lands subject to tax and not by an increase in tax rates or assessments. This is especially true in case of lands opened lately for farming or of plots owned by the State or municipalities, which were located in the vicinity of cities and transferred to private people or cooperatives. When the taxes collected on these lands and plots are deducted from the total taxes it will be observed that the net amount of taxes remained at the previous level. The net increase in land taxes during the period 1936 - 1959 amounted to 13 million Turkish liras, Increase in building taxes, on the other hand, totalled 38 million Turkish liras during 1959 - 1960.

Exemption of high agricultural incomes from income tax is to the benefit of rich land owners and does not affect agricultural workers or sharecroppers, whose incomes do not reach an amount liable to taxation. This situation serves to increase the inequality existing in the distribution of income within the agricultural sector and also in the general distribution of income.

The realization of the social justice targets of the plan depends on the various income group' contributing to development according to their capacity. This may be attained by eliminating the factors causing disparities in the distribution of income, by reducing the effect of excessive disparities and by taking necessary measures for the distribution of income on more equitable lines.

a. The short-term inflationary pressures arising in underdeveloped countries at the beginning of their development efforts will be checked.

b. Through the redistributive financial policy to be followed, the burden of taxes will be distributed more equitably, and necessary measures will be taken to direct the expanding social services to the desired fields.

c. Tax bases for yearly incomes derived from properties will be determined more realistically.

d. Equality of opportunity and social mobility will be assured with a view to encouraging the individual to develop his own abilities.

To provide a job with a minimum income for every person who wants to work is the first condition for realizing equality of opportunity. The high rate of unemployment in the underdeveloped countries is caused by the deficiencies existing in the basic economic structure of these countries. Full employment at adequate wage rates cannot be provided unless the social structure of the country is strenghtened and educational as well as other social services are promoted. Therefore, the first condition for equality of opportunity is to strenghtened the industrial structure of the country together with such public services as education, health and social security.

In the developed countries the system of education and other social services play an important role in providing wider equality of opportunity and social mobility. In Turkey, by raising social services to the required level and by providing schooling opportunities for all primary school children in particular, by giving assistance through a widespread scholarship program for high-school and college education and at the same time by improving health conditions and public services, by preparing and implementing programs for the construction of cheap and economic houses and by implementing the community development program, it will be possible to create new employment and consequently to improve the living standards of the individual as to increase economic productivity, which in turn will speed up the country's development rate.

Through the methods of community development, the development efforts of Turkey will be extended to the large numbers of people engaged in agricultural activities and will make it possible to raise the very low living and working standards of the agricultural population. This population is to be supplied with numerous services of which they are still largely deprived at present. These services will be provided within the framework of the social objectives and in compliance with the social structure and needs of the country. Measures will be taken in this field with a view to preventing waste in the use of resources and manpower and encouraging the people to participate in the work of public services; the utilization of the creative power of the community will thus make it possible to increase both resources and the number of people benefiting from these services and facilities.

The primary purpose of community development will be to raise agricultural productivity and farm incomes and to promote the maximum utilization of manpower and other resources. Thus, with the expansion of social services, particularly in the field of education, and with the successful implementation of community development projects, the people will be able to acquire new skills and a wider range of experience, as a result of which they will be able to assume new occupations and improve their social and living standards.

EQUILIBRIUM BETWEEN REGIONS

In Turkey there are great differences among regions from the standpoint of the volume of economic activity and income levels as well as of social services and facilities. The second important objective of planned development is to reduce the existing inequalities between regions and attain balanced interregional development.

Today, even the meagre fund accumulated with difficulty in the socially and economically underdeveloped regions are flowing into the developed regions, together with the enterprising people. This flow increases the proverty of these regions and widens the great differences existing between the developed and underdeveloped regions. The situation cannot be rectified unless extensive measures are taken in the economic field. This situation stands out clearly in Table 27. Taxes, particularly income tax, may be used as an index for the volume of economic activity and income levels in the different provinces. As seen in Table 27, the share of the taxes paid by the developed regions of Turkey has increased within the total tax revenue, and the share contributed by backward regions has declined. This shows that the rate of development in the more advanced regions is steadily rising above the national average, while that of the underdeveloped regions is falling. In other words from the standpoint of the volume of economic activity, the difference existing between the provinces is gradually widening.

Agricultural incomes in Turkey are not subject to income tax. Therefore, it may be argued that taxes alone are not a sufficient index of the volume of economic activity in the various provinces. However, as may be seen from Table 27, the agricultural income of provinces having a low income subject to taxation is more or less what one could predict. If the average per capita agricultural income is assumed to be 100, it amounts to 45 in Artvin, 48 in Bitlis, 65 in Diyarbakır, 41 in Hakkari, and 93 in Kars. These figures indicate that agricultural incomes in the provinces which are considered backward on the basis of the volume of tax payments, are also below the average level of the country.

The same wide differences observed between provinces in volume of economic activity and income levels may be observed, almost to the same extent, in the regional distribution of public services. There may well be a cause and result relationship between the two. The differences between provinces in the distribution of public services may be seen in the following tables.

TABLE 27 — Changes in the Tax Payments of Various Provinces

(in percentage)

Provinces	Income Tax Paid by Provinces in 1951 - 1952 as % of Total Income Tax	Income Tax Paid by Provinces in 1958 - 1960 as % of Total Income Tax	Changes in the Share of Provinces in total Income Tax between the two Periods	Total Taxes Paid by Provinces in 1950 as % of Total Tax Revenue	Total Taxes Paid by Provinces in 1960 % of Total Tax Revenue	Changes in the Share of Provinces in Total Tax Revenue between the two Periods
Bursa	1.70	2.60	+ 53	1.5	2.3	+ 53
Adana	2.10	2.80	+ 33	2.5	3.1	+ 29
İstanbul	36.00	44.30	+ 23	30.2	38.0	+ 12.5
Ankara	11.70	12.40	+ 6	10.4	10.8	+ 4
Diyarbakır	0.50	0.37	— 25	0.39	0.41	± 5 (1)
Artvin	0.22	0.14	— 34	0.14	0.14	0
Kars	0.28	0.21	— 25	0.30	0.24	— 20
Hakkari	0. 35	0.024	— 38	0.04	0.027	— 33
Bitlis	0.10	0.083	— 8	0.09	0.07	— 33

(1) The position is not changed by the large production taxes paid by the Ergani Copper Installations in Diyarbakır. The statement of the province's tax position is therefore accurate.

TABLE 28 — Number of Inhabitants per Medical Doctor in 1959

Istanbul	635
14 Provinces	2600
6 "	6695
8 "	9295
20 "	11271
18 "	15342

TABLE 29 — Number of Medical Doctors in Various Provinces in 1953 and 1959

	1953	1959
Istanbul	2 947	2 716
Ankara	593	1 048
Izmir	429	670
Adana	150	205
Bursa	165	181
Eskişehir	100	121
Isparta	30	43
Bitliş	21	14
Ağrı	18	16
Gümüşhane	17	12
Bingöl	14	12
Muş	13	11
Hakkâri	10	7

TABLE 30 — Number of Hospital Beds per 10,000 inhabitants in 1959

Istanbul	74.7	Adana	9.6
Isparta	40.7	Bitlis	6.5
Ankara	33.7	Kars	5.7
Izmir	27.2	Muş	5.9
Eskişehir	22.7	Ağrı	3.9
Bursa	13.0	Hakkâri	2.9

The inequalities in the distribution of health services shown in the above tables will increase unless the necessary measures are taken promptly. These inequalities may also be observed in Table 31 below.

TABLE 31 — Number of additional beds in provincial hospitals for every increase of 10,000 in the population during the period 1950 - 1959

Isparta	165.0	Adana	18.8
Istanbul	72.9	Mus	15.1
Ankara	62.7	Hakkâri	8.6
Izmir	60.5	Bitlis	8.5
Eskişehir	31.4	Ağrı	5.9
Bursa	20.8	Ordu	2.1

As may be observed from Table 32 below, a close a relationship exists between the distribution of health services and educational services. The inequalities observed in the distribution of health services may also be observed in the distribution of primary education, which represents the most extensive part of educational services.

TABLE 32 — Number of Pupils attending Primary Schools in the Provinces per 100 Inhabitanst

Isparta	11.5	Ordu	7.2
Eskişehir	11.5	Bingöl	6.1
Izmir	10.7	Bitlis	5.4
Adana	10.7	Muş	4.7
Bursa	10.1	Ağrı	4.6
Ankara	9.5	Hakkâri	1.4

The above tables reval that the provinces which are backward from the point of view of social services are also backward in economic activity and income levels. When the geographical distribution of backward as well as developed provinces is taken into consideration, it is apparent that each group of provinces forms a region in a different phase of development.

Various measures will be taken to minimize the great inequalities between regions.

- In the distribution of expenditure and investments to be made by the State in the field of social services, the inequalities between the regions in social services, economic activity and income levels will be taken into consideration and priority given to the backward regions. Economic activity will, in the long run, be influenced by those measures, and equality of opportunity will be established among the inhabitants of different regions. In addition to these long term measures, certain short term measures will also be necessary.

These measures are grouped under two headings. The first group of measures is related to the distribution of investments to be made by the State in various regions for the encouragement of economic development. The principles of implementation of regional development policy are contained in "Objectives and Strategy of the Plan." According to this document, investments will be distributed among the geographic regions in compliance with the principles of balanced interregional development.

In the selection of sectors which have a promising potential in the backward regions, the growth potentials of these regions compared to the other regions of the country will be taken into account and an order of priority established within each region.

As the target for the plan period is the attainment of a rate of growth of 7 per cent, the interregional distribution of investments will be made in such a way as to assure a 7 per cent rate of growth. Therefore in making economic investments priority will be given to backward regions provided that this does not have an unfavorable effect on the growth rate.

Besides the measures to be taken directly by the State for the development of regions, certain indirect measures will also be taken to prevent local capital and entrepreneurs leaving the backward regions and to encourage the flow of capital and entrepreneurs to these regions.

These measures will tend to reduce the cost of setting up and operating projects undertaken in backward regions by the private sector. For this purpose, industrial sites will be set up in certain backward regions, and cheapland, power, and credit will be made available for projects to be set up in them.

RULES OF THE MIXED ECONOMY

INTRODUCTION

The plan has been prepared, in compliance with the resolution adopted on the strategy of the plan, to embrace the mixed economy as a whole in which public and private sectors function side by side. The economic and social targets set forht in the plan strategy have been determined on the basis of the possibilities presented by the political and social order and the economic resources of the country, without trying to reach a final conclusion in advance on the growth of the public and private sectors.

The principal objective of the development policy is to attain within a free system a balanced rate of growth of 7 per cent and to achieve a just distribution of the benefits resulting from the sacrifices required for development. In establishing this policy, the public and private sectors have been taken into consideration as the two component parts of a whole, and not as two seperate sectors with conflicting interests.

In determining targets for the economic activities of the public sector, development potentials and trends in the private sector were taken into account. Development possibilities for the private sector have been planned in such a way as to achieve the objectives of the plan and to raise total savings and investment to the highest possible level.

The principles of mixed economy have been defined according to the equilibrium established in the Plan strategy between the political, social and economic factors community welfare. The division of labor, cooperation and competition to be established between the public and private sectors were determined on lines which will permit the achievement of the social and economic targets of the plan.

PRINCIPLES OF THE DIVISION OF LABOUR AND COOPERATION BETWEEN THE PUBLIC AND PRIVATE SECTORS

In a developing economy, the duties and functions of the State cannot be restricted by traditions. Economic development is a process requiring changes in the social and economic structure of a country. This objective, as well as that harmony among citizens and stability, may be achieved under certain conditions, such as equality in the distribution of income and a balanced structure of production, both of which require the intervention of the State.

The private sector alone cannot realize all the conditions necessary for economic development. Economic development will be attained by accelerating investment and making basic changes in the structure and methods of production. These changes cannot be accomplished solely by entrepreneurs who adjust their activities according to market conditions. The change from an underdevelped and stagnant economy to a progressive and dynamic one may be achieved through systematic and rational measures taken by the central authority. The development of Turkey's primitive economic structure into a more advanced production system was made possible by public investments and the activities of the State Economic Enterprises.

For this reason, it is neither necessary nor possible to draw a definite line between the activities of the public and private sectors. The State should be authorized to regulate economic activities with a view to create the conditions required for the attainment of the objectives of the plan. This necessity may be expressed more clearly through an example. Agricultural activity in Turkey is traditionally carried out by the private sector. Holdings consisting of the members of a single family are very common in this branch of the economy. However, without the leadership of the State, unless the State takes responsibility for certain activities, no progress can be achieved in this sector. In order to be able to attain an increase in the volume of agricultural production, certain requirements in the fields of irrigation, power supply, road construction, and communication services, as well as credit and marketing, must be met by the State, together with technical assistance and including the realization of basic structural changes such as land reform.

The State should be in the vanguard of progress in the industrial sector also by setting up enterprises requiring a high level of technical knowledge and capital in new fields of production.

The division of labor between the public and private sectors has not been determined in a dogmatic but in a pratical way. The division of labor will be based on the peculiar characteristics of these two sectors and on the prevailing economic order. Reorganization of this order will be made in accordance with the economic and social objectives of the plan.

a. As stated in the document on the plan strategy, in order to maintain a rate of growth of 7 per cent, he largest possible part of the increase in national income must be channelled into investments. However, any increase of the propensity to save is greatly influenced by social and cultural factors which cannot be changed within a short period of time.

In the plan, the amount of savings to be created by the private sector was initially estimated on the basis of previous trends; but after considering the measures to be taken by the State to encourage savings, estimates were readjusted on the assumption that in the plan period the private sector could realize a greater volume of investment by means of individual and corporate savings. For this purpose private sector savings will be encourged by tax and credit policies. However, all the additional resources required for the attainment of a rate of growth of 7 per cent cannot be obtained in this way. An increase in the savings of the private sector is closely connected with a rise in the profits of entrepreneurs. It is evident that a certain portion of the surpluses generated by the private sector will be used on consumer goods.

Therefore, the measures taken to raise private savings may result in a decline of total savings and thus cause an inequality in the distribution of income.

Under these circumstances the funds created through an equitable tax system and by the State Enterprises will also play an important role in increasing the resources required for economic development.

b. Total investments as well as the investments to be made in each sector by the State and private enterprise will be indicated in the annual programs. Thus, the minimum volume of private investment required in each sector will be indicated. Investment targets for the public sector will be readjusted according to the volume of investment actually made by the private sector.

Public sector investments have been determined as follows :

(1) Basic Investment (Infrasturcture)

In order to make the best use of the country's economic resources certain public services must be given greater emphasis than in the past. These services, which are the foundation of economic development, include both the traditional public services such as power supply, irrigation and dams, which are the responsibility of the central authorities even in the most advanced capitalist countries.

Investments in basic services require large capital sums and organizations and are such that they cannot be productive within a short period of time. Therefore, investments of this kind must be made by the State. These services are prerequisites for the investments to be made in productive fields.

Large sums have been allocated to such investments, particularly in the early phases of the development period, in order to create the basic structure required.

(2) Productive Investments

Productive investments will be made by the public sector under the following circumstances :

(a) Investments which are needed to increase the productivity and efficiency of the State Economic Enterprises. The State Economic Enterprises (including enterprises under the General Budget operating with revolving capital) today ocupy an important place in the Turkish economy.

Better use of the productive capacities of this sector will result in an increase in the level of production and generate an important part of the surpluses required to attain the development objectives :

Investment already started in this sector will be completed and their working capital needs secured by complementary investments.

(b) If private sector does not invest in a field is regarded as necessary in the plan and this situation creates significant bottlenecks in the economy, the State or public enterprises will readjust their investment programs to assure the realization of the necessary investment.

(c) The establishment of mixed enterprises, which lead to the waste or inappropriate use of public resources, will in principle not be encouraged. Only in specific cases, designed to mobilize private savings or encourage foreign capital, will mixed enterprises be set up by the State.

(d) The fields in which it is necessary in the public interest or for financial reasons to set up monopolies will be reserved to State Enterprises. The State will make necessary interventions when monopolistic practices by private concern produce injurious effects and speculative gains.

COMPETITION BETWEEN PUBLIC AND PRIVATE ENTERPRISES

The same rules of economic policy will apply to the public and the private sector. The basic principle followed in economic policy is to lay down common and clearly specified conditions for all enterprises engaged in economic activity.

a. The economic policy to be followed will be clearly defined. As stated in the Plan Strategy, the fiscal monetary, price, foreign trade and investment policies to be adopted will be clearly framed and consistently pursued. This will make it possible for both the public and private sectors to plan ahead and act with confidence.

b. The State will direct the investments of departments with general and annexed budgets and of the State Economic Enterprises according to the plan targets. In addition, it will provide guidance for private investment by issuing information on economic developments in general and the different sectors in particular, by publishing quarterly reports on the economic situation and by setting up an information office.

c. The State Economic Enterprises will follow a price policy designed to yield maximum profits. The prices charged by these enterprises will be fixed below cost prices only when this is required to give temporary protection to a new industry on the home market. This may be the case if demand has not developed sufficiently to enable the plant to work at full capacity or if is considered necessary for social reasons and as the result of a deliberate policy to protect certain groups of consumers. The losses incurred by the enterprises in such cases will be financed from the budget. Care will be taken to ensure that the above procedure does not in any way create unfair competition for the private sector.

d. Interest rates and terms and incentives to be provided for the repayment of interest and capital will be determined by sectors and in accordance with the plan targets.

e. Import programs will be determined according to the requirements of sectors. Import demands of the private and public sectors will be met after they have been examined in the light of their contribution to the plan objectives and social welbeing. In the protective tariff policy to be applied selectively to those of the new industries which will further the plan targest and whose cost and technical structure is expected to improve in the future, no discrimination will be made between the public and private sectors.

SECTION III

BASIC ORGANIZATION OF SOCIETY

INTRODUCTION

Economic and social development means, essentially, a transformation of the social structure. Change in social structure depends on development, but it is also a phenomenon that determines development and furthers it at a particular stage.

Development requires the combined efforts of all citizens : farmers, public servants, workers, engineers, technicians and entrepreneurs. The nature and fruitfulness of such efforts, however, depend on the social framework that the people and the State create.

Since the foundation of the Republic, the transformation of the social structure has been rapid and significant. The transformation in the next fifteen years will, without a doubt, be even more rapid and more significant. Since it is possible to evaluate conditions likely to be encountered during this period and the changes in the social structure as a whole, these changes should aid general development and not cause unacceptable difficulties.

If a development policy merely establishes a mechanical relationship between development and expenditure, such a policy falls short of its goals even when this relationship is maintained in a very coherent system. If one does not follow the transformation of the social structure and make constructive interventions, not only will the effort to develop run into difficulties in the long run, but also self-adjustment and eleventh-hour intervention will prove to be solutions with a high social cost.

The effect of expenditure and of the development rate upon the social structure and the changes that sould be made in this structure to realize the desired growth rate are here considered together.

In this model, factors not related to expenditures and factors that cannot be affected by political prefences or natural conditions were taken as the norms of the problem.

Such data include, primarily, a high rate of population growth, the present distribution of the population (age groups, urban and rural) and economic activity State and private ownership, i.e. in a mixed economy.

The structure of population and changes related to it are factors determining all the other parts of the system. The population factor should be the starting point of any systematic and comprehensive intervention, considering the inter-relationship of such changes, their inflexibility and relation to the plan targets.

The increase in population and migration to the cities necessitate a policy of rapid industrialization. It is accepted that the man-power and capital that such a policy requires can best be mobilized under a system of mixed economy. This should be taken as a fundamental prefence in considering the social structure.

On the other hand, the support of the growing industrial population necessitates the most productive use of the limited land. The present system of land ownership hinders increased production and is contrary to the goal of social justice; it must therefore be reformed.

The State takes upon itself important responsibilities in directing these efforts and in solving these problems in the interest of society. Hence, reorganization of the State Economic Enterprises and of Public Administration is one of the primary conditions of success.

Under the light of the experience in other countries, it should be stressed that the people must participate actively in the efforts of development, for achievement of successful results. The program of rural development and related changes in the social structure are important from this point of view.

Industrialization and urbanization will give rise to many labor problems and the need for social security. The clarification of the basic preferences in this respect and their application with courage will assure the attainment of social order and welfare in the manner desired by the community.

THE POPULATION PROBLEM

INTRODUCTION

In view of the close relationship between population and economic growth, great importance must be given to population trends and policies in development plans. Since the Second World War the death rate in most underdeveloped countries has declined rapidly while birth rates have not changed much. Thus the population growth rate rises steadily. This situation impedes development efforts because economic development, in simplest terms, means the increase of per capita national income. If population increases at the same rate as national income, there will be no change in the level of per capita national income. Therefore, some of the poorer countries are endeavoring to slow down the rate of increase of their population, parallel to making efforts to increase income.

Turkey's population is increasing rapidly. To achieve the highest possible economic growth rate has become a national policy. Therefore there is an overriding need for a change in the population policy.

POPULATION POLICY AT PRESENT

At the beginning, the Republican Government rightly supported a policy of population increase designed to achieve a decrease in the death rate and encourage an increase of the birth rate. A decline in the death rate cannot be regarded simply as a factor in a policy of population growth. Making people healthier and prolonging their lives are targets in themselves. Thus, the really important aspect of Turkey's policy for population growth is that related to births.

In 1930, when the General Health Protection Law gave responsibility for encouraging an increase in the birth rate to the Ministry of Public Health, the same law forbade the "import and sale of contraceptives and objects designated by the Ministry of Health as preventive of fertilization or as aids usable for abortions." The Turkish Penal Code, dated 1926, made induced abortion a crime, and an amendment of the same law, in 1936, forbade both sterilization and the dissemination of information about contraceptive practices.

POPULATION GROWTH

The population of Turkey, which was estimated at 13,684,000 in the 1927 census, is 27,830,000 according to the results of the 1960 census. The increase between the dates of the two censuses is 104 per cent. Except in the years of the Second World War, the average annual rate of increase has always been high, but showed a tremendous increase after the war. While the annual rate of increase between 1940 - 1945 was 10.6 per thousand, it reached 22 per thousand in 1945 - 1950, 28.1 per thousand in 1950 1955 and 21.5 per thousand in 1955 - 1960. The last figure is among the highest rate of increase in the world.

THE POPULATION OF TURKEY IN THE NEAR FUTURE

The future trend of the Turkish population is, in many respects, a highly important question from the point of view of planning. The population projetcions below are the results of efforts to find an answer to this problem.

a. So far immigration has not been significant. It will be less significant in coming years. Therefore, immigration has not been taken into consideration in these projections.

b. Looking at trends in other countries and at conditinos in Turkey, it has been assumed that the decline in death rates will continue.

c. The fertility level does not change rapidly. Moreover, all kinds of birth control are illegal in Turkey. It can therefore be assumed that the fertility rate in Turkey in the next period will not be different from what it has been in the past. The population projections in the plan are based on this assumption of high fertility. But if population policy is altered, we can expect a fall in the birth rate. It is very hard to predict the magnitude of this fall. Here, two alternative rates of all will be assumed and the result of the change in fertility will be calcuted. The first of these assumptions is a moderate fall in the birth rate. It has been accepted that the initial fertility level will fall by 5 per cent during each five year period starting in 1965 - 1970 (Medium fertility). The second alternative is a rapid fall. The assumption is that the initial fertility level will fall by 10 per cent in each five-year period starting in 1965 - 1970 (Low fertility).

The population projections until the year 1985, the rate of increase and the crude birth and death rates for each period according to the three fertility assumptions are shown in Table 33.

TABLE 33 — Population and Various Rates of Increase
1960 — 1985

(in thousands)

Population	**1960**	**1965**	**1970**	**1975**	**1980**	**1985**
High Fertility	27 830	31 996	36 697	42 558	49 947	59 162
Medium Fertility	27 830	31 936	36 401	41 579	47 744	55 016
Low Fertility	27 830	31 936	36 106	40 635	45 701	51 313
Life Expectancy at Birth (in years)	57.6	60.4	63.2	65.8	68.2	
Annual Rate of Increase (per 1000)						
High Fertility	27.9	28.2	30.0	32.5	34.4	
Medium Fertility	27.9	26.6	27.0	28.0	28.7	
Low Fertility	27.9	24.9	23.9	23.8	23.4	

EFFECTS OF A FALL IN FERTILITY

a. Rate of Population Increase

The rate of population increase will be high according to the results of all three projections. According to the low fertility projection the rate of increase in the period 1980 - 1985 is 23.4 per thousand. Even this is considered to be a high figure in the world today. The high fertility assumption yields a rate of 34.4 per thousand and the moderate fertility assumption gives a rate of 28.7 for the same period.

The economic significance of these rates is obvious. If fertility does not change, efforts must be increased and greater sacrifices accepted in order to raise per capita income by the same rate, whereas a fall in fertility will enable a higher rate of growth in per capita income or will lessen the burden of development.

b. Age Composition of the Population

At present, approximately 40 per cent of Turkey's population are children under 15 years of age. This is high rate in comparison to the more developed parts of the world. Since this situation means that the burden to be born by the active population is greater, the efforts necessary for development will also have to be greater. A decline in fertility will change the situation by lowering the proportion of children in the population and raising the proportion of the active population. But there will be little change in the ratio of the aged. The situation can be seen more clearly in Table 34.

TABLE 34 — Age Composition of Population in 1960 - 1985
(According to the assumptions of high, medium and low fertility)

(in thousands)

	1960	1965	1970	1975	1980	1985
0—14						
High	11 910	13 757	15 506	17 896	21 401	26 035
Medium	11 910	13 757	15 210	16 917	19 198	22 173
Low	11 910	13 757	14 915	15 973	17 155	18 757
15—64						
High	14 919	16 937	19 663	22 844	26 422	30 882
Medium	14 919	16 937	19 663	22 844	26 422	30 596
Low	14 919	16 937	19 663	22 844	26 422	30 311
65+						
High	1 001	1 242	1 528	1 818	2 124	2 245
Medium	1 001	1 242	1 528	1 818	2 124	2 245
Low	1 001	1 242	1 528	1 818	2 124	2 245
Percentage Distribution						
0—14						
High	42.8	43.1	42.3	42.1	42.9	44.0
Medium	42.8	43.1	41.8	40.7	40.2	40.3
Low	42.8	43.1	41.3	39.3	37.5	36.6
15—64						
High	53.6	53.0	53.5	53.6	52.9	52.2
Medium	53.6	53.0	54.0	54.9	55.3	55.6
Low	53.6	53.0	54.5	56.2	57.8	59.1
65+						
High	3.6	3.9	4.2	4.3	4.3	3.8
Medium	3.6	3.9	4.2	4.4	4.5	4.1
Low	3.6	3.9	4.2	4.5	4.6	4.4

The figures for 1985 show a big difference between child population and active population percentages. For the aged population, the difference is not significant. Looking at the absolute figures, we see that the aged population in 1985 is the same in all the three projections (2,245,000). The situation is the same for the population of working age up to 1985 : absolute figures are the same in all the three projections. This is due to the fact that the change in fertility starts in 1965. The population that will be over 15 years of age in 1980 will be that borne before 1965. The difference between the absolute figures for the active population in 1985 according to the three projections will be very insignificant. The population aged 15 - 64 numbers 30,882,000 at high fertility and 30,311,000 at lowfertility, giving a difference of 571,000. In other words, according to the low fertility assumption the active population in 1985 will be lower than the number of active population calculated on the assumption of high fertility by only a small margin of 2 per cent. But the difference between the projections of child population according to the different fertility assumptions is quite big, Although the population aged 0 - 14 in 1985 according to the high fertility assumption is 26,035,000, according to the low fertility assumption the figure is 18,757,000. The difference is 7,278,000.

These changes in the age composition are very important in regard to problems of economic development. It must be said that the fall of fertility will not be important from the point of view of the working population. The decrease in the number of people of working age caused by a change in the fertility of the population will not be important. Further more, the population of working age is only one of the determinants of manpower supply. For example, since a fall in fertility will facilitate women's participation in work, the manpower supply envisaged in the low fertility statistics may be equal to the manpower supply envisaged in the high fertility statistics.

One should indicate that in the near future Turkey will probably suffer not from a scarcity but from an excess of manpower. Therefore, the slowing down of the increase of the population of working age is something to be desired, at least the immediate future.

Since a slowing down in the population growth rate and especially a fall in the proportion of the child population to the working population enables increases in economic investments with small capital-output ratios instead of demographic investments with high capital-output ratios, employment possibilities may increase.

Another highly important point which should be mentioned here is the following :

While summarizing the possible effects of a decrease in fertility one should say that the rate of population growth will be high even if birth rates slow down considerably within the next decade. Turkey will benefit from the positive economic and social results of an expanding population. The rate of increase, however, will be high with a high fertility and more moderate with a medium or low fertility rate.

Thus, the more serious inconveniences of the present tremendous rate of population growth will be partially eliminated.

NEW POPULATION POLICY

The population policy of the past, which aimed understandably at increasing the population as rapidly as possible, is not compatible with present conditions. Therefore part of today's population policy which prohibits population planning should be changed. This change will help to slow down the rate of population growth as well as the ratio of child population to active population.

It is necessary here to clarify the trem "population planning." A misundesrtanding in certain quarters has created the impression that population planning is tantamount to State intervention in the matter of having children. On the contrary, population planning is a democratic metnod, making it easier for families to have the number of children they want and to have them at the time that they want them.

Measures related to a new population policy would be the following:

a. Laws prohibiting the spreading of knowledge about contraceptives and the import and sale of contraceptives should be repealed.

b. Personnel (doctors, nurses, midwives, assistants, health officials) employed in the Public Health Service should be educated in population planning.

This would be done not only by adding new courses to the curriculum of the related schools and training centers, but also by providing new courses for the personnels who have already comleted their studies.

c. These officials will be expected to provide free information about contraceptives to those who want it and, should it be so decided to supply contractives free of charge.

d. Use should be made of existing facilities to give education in population planning.

e. Possibilities for importing contraceptives at low prices, producing them in Turkey and distributing them without charge to the needy should be examined.

STRUCTURE OF THE MIXED ECONOMY

Turkey has an economic structure in which public and private enterprises function side by side in many branches of the economy.

1. While the percentage of public to total investments was 36 per cent in 1950, it rose to 55 per cent in 1960. The reason for this rise was not, however, an increase in the State's productive activities, but an increase of investments in State services and basic services. The investments in the general and annexed budgets constituted, on the average, 66 per cent, and those of State Economic Enterprises, 34 per cent of total public investments between 1950 - 1960.

The percentage distribution of all investments between 1959-1961 is shown in Table 35.

TABLE 35 — Distribution of Investments

(in percentage)

	1959	1960	1961
General and Annexed Budgets	27.9	29.5	37.1
State Economic Enterprises	19.5	20.3	16.9
Local Administrations	3.3	4.9	5.3
Private Sector	49.3	45.3	40.7
	100.0	**100.0**	**100.0**

When compared with some Western European countries, the ratio of investment by State Economic Enterprises to total investment is rather low. In 1957 this ratio was 32 per cent in the United Kingdom, 25 per cent in France and 27 per cent in Italy.

Since establishments such as the State Railways and the P.T.T., whose activities are classified as public services, have the status of State Economic Enterprises, the ratio of the productive investments of the public enterprises is actually still lower.

2. As distinct from internal and external security services, and administrative and health, education, transport and communications services, which are all under the control of the State, the principal fields where State Economic Enterprises are active are manufacturing, mining, energy and banking.

The ratio of public to private economic activity varies from sector to sector but it can be said genarally that in the traditional sectors the private sector preponderates while public enterprise has the leading role in fields of activity which require advanced bussiness administration techniques and big capital.

In the agricultural sector, which creates nearly 40 per cent of the national income, private enterprise in the from of small holdings predominates. Only 1 per cent of agricultural income is created in the State farms and other State enterprises. A great part of the contribution of forestry to national income comes from State enterprises. Private enterprise is dominant in fishing.

In industry, which provides 15 per cent of the national income, the private sector produces 51 cent of the value added. This amount includes the production of small units which are about 60,000 in number; income from these units constitutes 34 per cent of the income that private enterprise creats in industry.

83 per cent of industrial income is created by enterprises that employ more than ten workers or machines of more than 10HP. 220 public enterprises and 5,200 private enterprises participate in this activity in equal ratio in terms of their production value. In the sub-sectors of the manufacturing industries the ratio of public to private production is different. The cement industry is mostly in the hands of private and mixed enterprises. The situtation is the same in the field of machines and tools.

The paper industry is mainly in the hands of the State. In raw rubber and textile industries private enterprises predominate. In the field of mining, which contributes 2 per cent of the national income, the reverse is true with State enterprises accounting for three fourths of total production. 60 per cent of the production of the private sector is under the control of twenty large enterprises, while 40 per cent of it is due to small enterprises.

Energy and hydro-electric establishments are almost wholly in the hands of the state.

90 per cent of construction, which accounts for 6 per cent of the national income, and 90 per cent of commercial activity, which constitutes 8 per cent of the national income, is carried out by private enterprises. State constraction account for half of the activity in the construction sector, but, in most cases, State projects are undertaken by private contractors. State trading operations are conducted by a few big enterprises, such as the Soil Products Office, Agricultural Supplies, the Petroleum Office, Gima and the Sümerbank.

Public and private enterprises work side by side in transport and communications, which constitute 7 per cent of the national income. The State Railways and the communication services are a State monoply. Internal airlines are in the hands of the State. The State is responsible for the construction and care of highways. The private sector dominates in road transport. International maritime transport is divied fairly equally between the Maritime Transport Corporation, which is a State enterprise, and private companies. Passenger transport between Turkish ports is in the hands of the State. Private enterprise seems more active in freight transport.

More than 60 per cent of financial services (such as banking, insurance etc.) are carried out by official institutions.

The liberal professions and the housing sector, each of which constitutes 4 per cent of the national income, are totally in the hands of the private sector. State services account for 10 per cent of the national income.

3. The field of industry in which private enterprise is most active is textiles. The value added in this field constituted 35 per cent of the income created by private manufacturing industry in 1960. Food, chemical products (including pharmaceutical plants.) stone and earthware industries are fields in which the private sector is active. These four sectors provide 72 per cent of the income created by private industrial enterprises.

Iron and steel, printing, tobacco and rubber industries, which are of lesser importance, constitute 15 per cent of private industrial income.

Public enterprises occupy an important place in the production of alcohoic beverages, and in transport, coal, petroleum, iron and steel industries.

4. There are certain differences between public and private enterprises from the point of view of geographical distribution. Except for some very small enterprises, private enterprise is concentrated in Istanbul. More than half of the income of private industry is created in İstanbul, where almost half of the workers in private industry are employed. Istanbul is followed by Izmir (where 15 per cent of the income of private industry is created), Adana, Bursa, Ankara, Aydın, Eskişehir and İçel.

The State enterprises are spread out equally over the country and are not concentrated anywhere.

5. Although public and private enterprises conduct their activities side by side in many fields, the organization of their enterprise and their methods of work are different. Generally, public enterprises are much bigger than private enterprises, and usually utilize capital intensive methods. Compared with private enterprises that employ ten or more workers, the productivity of workers in public enterprises is higher.

In 1959, while the average number of workers in private enterprises employing ten or more workers was 67, the average number in public enterprises was 575. When the private enterprises that employ ten or more workers are classified according to the number of workers they employ, the enterprises employing 10-50 workers constitute the great majority. Workshops employing less than ten workers are estimated to number at least 60,000. These small units can be found in the clothing, metal, food processing, and carpentry industries. The value added that they create is as great as that produced by the private enterprises employing ten or more workers. Although the number of the big and medium-size enterpsises in the private sector is increasing, one should remember that small enterprises using primitive production means and methods are still in the majority.

The fussion of these very small enterprises could, doubtless, reduce costs in private enterprise and increase their productivity.

Industrial enterprises in the private sector - including those which have the status of corporations - are generally family enterprises.

6. State enterprises usually employ more advanced methods of bussiness administration and organization. State enterprises, which have brought into Turkey advanced production techniques, modern business administration and accounting methods, have played a great role in the training of technical personnel in Turkey. Since their inception, the State Economic Enterprises have placed great importance on the education of administrators and technical personnel. Extensive opportunities have been provided for the personnel in respect to on-the-job training and training in different organizations.

But, since the State Economic Enterprises have not been granted the freedom to act like entrepreneurs, their freedom of action in the matter of personnel and price policies is very restricted.

The fact that the salaries of senior personnel have failed to keep pace with rising prices has caused the departure of many valuable experts.

State enterprises have applied a more suitable wage policy than private sector enterprises. They have been better in applying regulations pertaining to workers' welfare and have made a greater effort to provide them with housing and other social facilities.

While private enterprises are able to adjust their prices to the market with the aim of making the highest profits possible, the same freedom of action is denied to public enterprises. Price controls, which are only applied to the private sector under extraordinary circumstsances, have become a normal feature in public enterprises.

Since enterprises in the private sector are mostly family establishments, ownership and the function of administration have become mixed. The owners of these enterprieses do not yet appreciate the usefulness and need of trained administrators and managers. They usually carry out administrative functions and do not differentiate between these seperate functions or the incomes derived from them. In addition, the control of production, marketing and finance is generally not clearly divided and the responsibility for these separate activities is not distinguished clearly.

7. The fact that private enterprises are family enterprises prevents the formation of a credit market aand these enterprises thus experience great difficulties in obtaining capital from outside their family into their busines for fear their means of control may be lessened. On the other hand, members of the free professions, rentiers and civil servants who keep limited amounts of liquid assets, refrain from investing in these enterprises since current laws do not protect the rights of these who possess a small share of the capital in a private company.

The long-term financing difficulties that entrepreneurs have experienced in recent years were due, to a large extent, to the absence of a capital market and the entrepreneurs' habit of acting individually. Entrepreneurs who wanted to widen their activities resorted to credits as a means of securing additional funds. The inadequacy of longterm investment credits has induced entrepreneurs to meet their fixed capital investments with short - term credits. Meeting long-term needs with righ interest short-term credits has led to the establishment of economically weak and short-lived enterprises.

The financing of the State Economic Enterprises has not been organized on the basis of sound financial resources and a long-term plan. In addition to the funds that they create themselves, the enterprises have secured funds from the Amortization and Credit Fund, the Pension Fund and the Workers' Insurance and have used a part of the counterpart funds from foreign aid.

However, the fact that the capital paid-up is a very small part of total assets and liabilities, together with defective price policies and management has increased the demand of these enterprises for loans from the Central Bank to meet their fixed and working capital requirements.

8. The existence of widespread idle capacity is a great problem for both sectors. In particular, the fact that existing establishments in the machine and tool industry are not used constitutes a heavy drain on the economy. Problems in the private sector arise from the following : the uses of short-term credits to finance fixed capital installations; the difficulties met in securing working capital; the insufficient development of the market; the difficulty in finding raw materials of the right quality: the fact that prices are based on total costs rather than on marginal costs; administrative deficiencies and excessive investment in certain sectors.

The fact that enterprises in many branches of industry have not formed organizations to pool their knowledge for the solution of common problems is one of the reasons for the emergence of idle capacity. In the public sector idle capacity is due more to defective organization.

REORGANIZATION OF PUBLIC ADMINISTRATION

BASIC PRINCIPLES AND METHODS

In order to achieve success in the realization of the plan targets it is essential that public administration, which is the most important factor in the implementation of the plan, should be reogranized so as to be able to discharge the functions assigned to it. This reorganization should be carried out according to the principles stated below :

a. The aims and objectives, the duties and responsibilities of administrations should be defined clearly and the necessary departments should be created in conformity with the objectives; the execution of planned and coordinated work should be ensured;

b. Functions, internal units, relationships and methods should be determined on clear - cut lines;

c. An effective personnel policy should be adopted which would cover problems of employment, training and of evaluation of performence.

d. Methods of budgetary and financial supervision should be revised and cost accounting methods be improved in line with the requirements of modern administrative units;

e. Responsibility for execution should be fixed clearly and functions and competences assigned accordingly;

f. Division of labor and collaboration should be ensured, duplication of work and unnecessary work should be prevented and clear-cut relationships in the delegation of authority and responsibility should be established;

g. A system of control which would ensure that work is carried out efficiently and according to program should be applied;

h. Organizational units should submit periodic progress reports which would be evaluated to see whether they are functioning according to the aims of their establishment.

To ensure that these principles continue to be applied consistently is the most important problem of reorganization.

With time, important changes take place in the character and composition of the duties of the State and new public services are added to those already existing.

If those changes are not made in the light of the above principles, certain departments may be overloaded with work, others may become inactive and there may be confusion as to the division of work and of responsibility.

Therefore, it is necessary to revise administrative services constantly to readjust public adminisration to the new needs which arise and to coordinate services in the light of changing conditions so as to prevent confusion and disorganization. The reform of the administration to meet present needs is not conceived as an action that will be completed within a given time. After administration as a whole has been reorganized and main lines and principles of its development have been defined, administrative services will be reviewed constantly and systematically. However, it is essential that these adjustments should be made without injuring the stability of the administration or the confidence felt in it.

PRESENT SITUATION AND MEASURES ENVISAGED

Today's administration is based on the system in force under the Ottoman rule, which has been modified to take account of changed conditions.

However, since these modifications were not based on well-defined principles, the structure of the administration is entirely inadequate and cumbersome so far as divison of work and coordination is concerned. Therefore, it is essential to improve the administrative structure of the central government (together with the central and provincial organizations) and of local goverment (provincial administration, together with the municipalities and villages) and make it conform, in regard to rationalization and expediency, to the needs of a developing economy.

Such a large scale reorganization requires a long period of preparation and investigation. In view of the extent of the problem and of the possibilities at hand, the preparations should be well phased. Priority was accordingly given to structural reforms in central administration when the problem was examined in the "1962 Transition Program."

A detailed survey is being conducted to analyze the present situation and make the necessary recommendations regarding the guiding lines and the basic principles of reform. In this survey fifty organizations are re-examined with regard to distribution of duties, overlapping of authority and the place of these organizations in the set-up of the government. At the same time, a survey of local government will be started in which special attention will be paid to the question of village boundaries which are the cause of notable social problems.

After these surveys have been rapidly concluded, the basic principles of a reform embracing the whole administration will be defined. The department that will be responsible for applying these reforms will then be set up and the work of reform will begin to be carried out by gradual stages within this framework.

REORGANIZATION OF STATE ECONOMIC ENTERPRISES

INTRODUCTION

Apart from the public services and duties that the State performs by right of its sovereignty, it also carries out certain activities that are purely economic in character. In its economic activities the State acts as an entrepreneur, financing its enterprises with the proceeds from the goods and services provided. These functions need to be organized along lines which differ from the normal mechanism of public administration. It is necessary that

a. the enterprises be considered as independent units;

b. the prices charged for the goods and services produced correspond to current market prices;

c. as the enterprises are State-owned, the overall decisions taken at higher levels proceed from a central organ which can assure their conformity wiht development policy and objectives; on the other hand, as the enterprises will function under market conditions, they must have sufficient autonomy to make operational decisions with the required flexibility and speed.

These conditions could also be realized, with the mechanism of revolving funds within the traditional set-up of the State. It may even be said that such a mechanism would yield good results in purchases and sales among State enterprises and in monopoly activities and general services of a certain type. However, this simple organization would be inadequate for the purpose of carrying out all the economic activities of the State.

These enterprises may be State economic enterprises, State companies or semi-official companies, whichever is most suitable, and may be accorded the freedom of action needed; they must, however be ultimately responsible to the State.

The State as the regulator of society has quite different authorities and responsibilities from those it assumes as an entrepreneur. The basic principles of a mixed economy require that private enterprise and such organizations as State Economic Enterprises be subject to the same market conditions and the same regulations. The government is the highest executive organ responsible for the state of society. Therefore, in order to treat enterprises in the public and private sectors on an equal footing, the government must distinguish between its activities in economic and other fields.

Since the State Economic Enterprises are to be one of the main instruments of overall development, they should be administered in accordance with the general policy of the government and the plan targets; decisions should be consistent and the activities of the enterprises should be coordinated.

PRESENT SITUATION

a. Background

The first public enterprise established in Turkey was the Sumerbank, which took over the functions of the former State Industrial Office and the Industrial Credit Bank. A year later, in 1935, the Etibank was established to work in the more limited fields of mining and electricity. in 1937 the Agricultural Bank was converted into a State Economic Enterprise. These three organizations were the nucleus of the State economic enterprises and contributed capital to a great number of public enterprises which were set up subsequently.

b. Capital

According to a study made in 1960, the total assets of about 150 different organizations and of the State and other similar Economic Enterprises are 36.8 billion TL. and the paid up capital 6.5 billion T.L.

At the end of 1960, 101,000 salaried officials, whether falling or not under the State wage schedule, and 193,000 workers, or a total staff of 294,000 were employed in those enterprises.

According to Law No. 3460, which lays down the legal framework of the State Economic Enterprises, and according to some other special laws and to the National Protection Law, these organizations may be of the following types :

— Organizations of primary importance (the real State Economic Enterprises) such as the Sumerbank, the Etibank, the Agricultural Bank, the Soil Products Office and the Petroleum Office;

— the "establishments" set up within the bigger enterprises;

— enterprises whose capital has been provided entirely by either the Treasury or the State Economic Enterprises;

— mixed companies in which private capital has a share.

However, since Law No. 3460 failed to indicate what kind of organization would be suitable for the different types of enterprise and since there is no criterion to go by, there has been some confusion regarding the different types of organizations. For example, the Turkish Sugar Factories Corporation was established by the Sümerbank, the Agricultural Bank and the Ishbank. The Sümerbank and the Sugar Corporation are also among the founders of the Nitrogen Industry. Finally, the Sümerbank, together with the Sugar Industry and the Nitrogen Industry was also one of the founders of the Machinery Spare Parts Corporation.

The nominal and paid-up capitals of the State Economic Enterprises, listed according to their date of establishment, are shown in Table 36.

TABLE 36 — Nominal and Paid-up Capital of the State Economic Enterprises.

(000 TL.)

Name of Enterprise	Date of Establishment or Year in which the Enterprise became a State Economic Enterprise	Capital Nominal	Capital Paid-up
Sümerbank	1934	500 000	500 000
Etibank	1935	500 000	499 561
Agricultural Bank	1937	750 000	485 964
Soil Products Office	1938	600 000	600 000
Agricultural Supplies Organization	1944	100 000	57 031
Machine & Chemical Industries	1950	400 000	207 864
State Railways	1953	2 500 000	2 304 913
Post, Telegraphs & Telephone	1953	300 000	176 910
State Supplies Office	1954	100 000	32 280
Cellulose and Paper Mills	1955	100 000	99 000
Iron & Steel Works	1955	400 000	376 316
Coal Enterprises	1957	750 000	367 300

Note : In view of its special position the "Atatürk Forest Farm" has not been included in this Table.

The results of a study of the companies founded by the State Economic Enterprises themselves or together with the private sector are grouped in the following tables.

Companies, whose whole capital belongs to the State Economic Enterprises are listed in Table 37.

TABLE 37 — Companies, whose whole capital belongs to State Economic Enterprises

(000 TL.)

Name of Company	Nominal Capital	Paid-up Capital
Lamb Breeding and Trade L. L. Co. (*)	600	300
Wool and Mohair J. S. Co. (**)	16 000	15 000
Artificial Wood Industry J. S. Co.	8 000	8 000
Raw Rubber Industry J. S. Co.	10 000	6 500
Nitrogen Industry J. S. Co.	120 000	120 000
Porcelain and Tile Factories L. L. Co.	80 000	20 000
Eti Construction L. L. Co.	30 000	30 000
Simel L. L. Co.	31 500	1 500
Construction and Materials L. L. Co.	30 000	30 000
Ankara Construction L. L. Co.	20 000	20 000
Istanbul Construction L. L. Co.	10 000	10 000
Serap Metal J. S. Co.	5 000	5 000
Sugarbeet Planters Cooperatives	85	85
Anatolian Railways J. S. Co.		
Press Advertisment Corporation	2 220	2 220

(*) L. L. Co. - Limited Liability Company.
(**) J. S. Co. - Joint-Stock Company.

Enterprises, more than half of whose capital is owned by State Economic Enterprises are shown in Table 38.

TABLE 38 — Enterprises, more than half of whose capital is owned by State Economic Enterprises

('000 TL.)

Name of Enterprise	Nominal Capital State	Nominal Capital Private	Paid-up Capital State	Paid-up Capital Private
New Celtek Lignite Enterprise J. S. Co.	3 500	1 500	3 500	1 500
Sugar Factories J. S. Co.	14 666	7 334	14 666	7 334
Aksaray National Assurance	5 712	288	5 284	288
Feed Industry J. S. Co.	15 870	30	15 497	20
Kilis Olive Oil Industry J. S. Co.	4 593	1 407	1 148	1 365
Manisa Cotton Textile Industry J. S. Co.	57 011	7 989	54 388	7 974
Karaman Cotton Yarn and Fabric Ind. J. S. Co.	4 391	1 609	4 391	1 251
Maraş Cotton Weaving Industry	3 139	861	3 139	740
Adıyaman Cotton Weaving Industry	3 684	316	3 684	173
Eskişehir Cotton Print Industry	4 520	1 480	4 520	1 476
Nevşehir Cotton Weaving Industry J. S. Co.	2 990	1 010	2 990	509
Bergama Cotton Yarn and Fabric J. S. Co.	26 994	8 006	26 994	8 006
Antalya Cotton Weaving Industry	36 190	13 810	36 190	13 810
Salihli Valonia and Valex Indust. J. S. Co.	3 570	3 430	3 570	3 397
Çanakkale Valonia and Valex Ind. J. S. Co.	607	193	607	68
Ordu Soya Industries J. S. Co.	1 500	500	1 500	160
Ulfet Food Stuffs and Soap J. S. Co.	3 500	2 500	3 500	2 500
Turkish Petroleum J. S. Co.	148 250	1 750	148 250	1 750
Çukurova Petroleum J. S. Co.	17 434	2 566	17 434	2 566
Söke Cement Industry J. S. Co.	2 801	2 199	2 801	2 199
Afyon Cement Industry J. S. Co.	13 821	1 179	13 821	1 179
Gaziantep Cement Industry J. S. Co.	15 514	1 486	15 514	1 496
Turkish Cement Industry J. S. Co.	90 000	10 000	90 000	10 000
Ankara Cement Industry J. S. Co.	13 333	1 667	13 333	1 667
Balıkesir Cement Industry J. S. Co.	12 697	2 303	12 697	2 303
Çorum Cement Industry J. S. Co.	18 853	1 147	18 853	1 147
Bartın Cement Industry J. S. Co.	4 850	1 150	4 850	1 150
Elâzığ (Altınova) Cement Industry J. S. Co.	20 851	1 149	20 851	1 149
Electro - Metallurgy Industry	9 000	6 000	9 000	6 000
Iltemel L. L. Co.	258	142	188	142
İlsu	240	60	240	60
Amac	1 368	383	1 368	383
Ankara Construction and Estate Co.	64 156	844	64 156	844
Kepez and Antalya Electricity J. S. Co.	25 660	4 340	25 660	4 340
Domestic Products Trade	370	130	148	52
Central Bank	9 477	5 523	9 477	5 523
Turkish Vakıf Bank J. S. Co.	39 500	10 500	29 574	10 500

TABLE 38 — (Continued)

('000 TL.)

Name of Enterprise	Nominal State	Capital Private	Paid-in State	Capital Private
People's Savings Fund J. S. Co.	93 700	6 210	65 195	6 325
Ankara Savings Fund	4 772	450	4 321	448
Turkish Real Estate and Credit Bank	297 400	2 600	297 400	2 600
Tutum Bank	7 007	2 993	7 007	2 993
İzmir Savings Fund	1 846	154	1 846	154
Güven Insurance Co.	997	3	997	3
Maritime Bank Naval Transport J. S. Co.	129 550	450	109 550	450
Turkish Airlines J. S. Co.	55 225	4 775	54 940	4 173
Airplane Service J. S. Co.	2 330	170	2 330	170
Tourist Travel	1 150	100	1 095	100
Bursa Cold Storage Depot	130	120	78	72
Gelibolu Cold Storage Depot	22	8	22	8
Bursa Thermal Springs J. S. Co.	1 253	747	1 253	747
Emek Movies L. L. Co.	1 490	10	1 490	10
Emek Enterprises L. L. Co.	1 490	10	1 490	10
Thracian Cement Industry J. S. Co.	14 056	1 944	14 056	1 763
Niğde Cement Industry J. S. Co.	2 854	2 146	1 430	1 265
Maritime Bank	498 800	1 200	489 255	1 200
İstanbul Savings Fund	—	—	6 607	566
İnan Insurance S. S. Co.	465	35	465	35

Enterprises in which the share of State and private capital is equal or in which public enterprises have a large nominal capital are shown in Table 39.

TABLE 39 — Mixed Enterprises

('000 TL.)

Name of Enterprise	Nominal State	Capital Private	Paid-in State	Capital Private
Dairy Stock and Milk Industry	3 700	3 800	2 775	1 830
Water Counter Industry (SATAS)	328	412	328	412
Textile Dyes Industry T. J. S. Co.	5 500	7 700	1 925	1 885
Balıkesir Cold Storage Plant	49	51	49	51

Mixed companies in which private enterprise dominates are shown in Table 40.

The Ereğli Iron and Steel Factories Joint-Stock Company has not been included in the classification on account of its special position.

TABLE 40 — Mixed Enterprises in which Private Capital Predominates

('000 TL.)

Name of Enterprise	Nominal Capital		Paid-in Capital	
	State	Private	State	Private
Seed Improvement and Reproduction J.S.Co	580	1 420	290	710
Coal Works J. S. Co.	3 600	6 400	2 700	4 800
Sahnamiz Lignite J. S. Co.	350	650	175	400
Antalya Slaughterhouse Co.	8	12	8	12
Bilecik Canning Industry J. S. Co.	654	846	654	542
Kepez Fruit-Vegetable Production and Canning J. S. Co.	450	550	450	550
Gülbahçe Canning Industry	160	1 000	160	—
Adapazarı Sugar Factory J. S. Co.	4 542	5 458	4 542	5 458
Kütahya Sugar Factory J. S. Co.	3 980	4 020	3 980	4 020
Amasya Sugar Factory J. S. Co.	1 000	9 000	1 000	9 000
Kayseri Sugar Factory J. S. Co.	800	11 200	400	5 600
Konya Sugar Factory J. S. Co.	1 000	9 000	1 000	9 000
Concentrated Feed J. S. Co.	120	880	120	880
Balıkesir Cotton Industry J. S. Co.	5 205	5 295	5 205	5 295
Aydın Textile (Yarn and Fabric) and Vegetable Oil Industries	5 020	24 980	5 020	24 930
Sakarya Raw Rubber Industry J. S. Co.	10 000	30 000	10 000	19 500
Commercial Fertilizers J. S. Co.	5 380	5 620	5 380	5 620
Artificial Fibres Industry J. S. Co.	4 500	25 500	1 125	6 375
İpraş	44 990	45 010	44 990	45 010
Çanakkale Ceramic Factory J. S. Co.	3 000	6 000	3 000	6 000
Eskişehir Cement J. S. Co.	3 500	11 500	3 500	11 500
Konya Cement Industry J. S. Co.	7 000	15 000	4 500	14 294
Mannesman Sümer Pipe J. S. Co.	2 400	3 200	2 400	3 200
Steel L. L. Co.	1 259	2 557	1 259	2 557
İstanbul Iron and Steel Industries	800	1 200	800	1 200
Silver Industry and Trade J. S. Co.	750	5 250	750	5 250
Arçelik	1 125	6 375	1 125	5 737
Minneapolis Moline (Turkish Tractor and Agricultural Machinery J. S .Co.)	8 988	11 012	8 988	11 012
Electrical Appliances J. S. Co.	983	1 201	983	1 205
Turkish Otomotive J. S. Co.	4 000	15 000	4 000	14 648
Emek Construction J. S. Co.	247	253	247	253
Metal Construction J. S. Co.	2 498	2 502	2 498	2 502
Aegean Electric J. S. Co.	7 693	18 307	7 693	12 727
Cukurova Electric J. S. Co.	15 200	19 800	14 300	16 950
Migros	3 800	5 200	3 800	5 200
Gima Ltd.	10	490	2	123
Basic Food Products (GİMA)	23850	24 150	19 124	16 875
Ishbank J. S. Co.	3 939	6 061	3 939	6 601
Commercial Bank	1 571	14 929	1 378	10 996
Credit Bank J. S. Co.	307	19 693	113	14 034
Vine - growers Bank J. S. Co.	100	4 900	100	2 600
Tobacco - Growers Bank J. S. Co.	164	4 836	164	4 836
Workers' Credit Bank J. S. Co.	400	2 600	400	2 600
Mining Credit Bank J. S. Co.	—	—	—	—
Railways Bank	7 468	14 532	6 163	9 585
Sugar Bak J. S. Co.	1 500	18 500	1 500	16 800
Ankara Insurance Co.	298	702	298	702

TABLE 40 (Continued)

Name of Enterprise	Nominal	Capital	Paid-up	Capital
	State	Private	State	Private
Anatolian Insurance Co.	606	894	606	894
Sugar Insurance J. S. Co.	310	2 190	233	1 642
Railway Insurance	750	1 250	750	1 250
Raynimens Insurance L. L. Co.	480	520	480	520
Güneş Insurance J. S. Co.	995	1 505	498	752
Başak Insurance	1 400	1 600	700	800
National Reassurance J. S. Co.	100	900	100	900
Erofima	277	94 973	277	—
Industrial Transportation J. S. Co.	1 670	3 330	1 670	3 330
General Stores J. S. Co.	3 500	6 500	3 500	6 500
Bandırma Cold Storage J. S. Co.	15	485	15	485
Beet - growers Association J. S. Co.	100	900	100	900
Anatolian Agency	9.5	10.5	9.5	10.5
Ankara Palas	256	744	256	744
Mans Commercial and Industrial J. S. Co.	100	2 900	25	725
Ceyhan Industrial and Commercial Enterprises J. S. Co.	30	2 970	30	2 970

Closer inquiry shows that the ratio of State capital to private capital in the State economic enterprises is higher than it appears in the above tables.

In these tables, the participations of the Turkish Business Bank (İş Bankası), of cooperatives and enterprises with similar capital status are included under the private capital heading. In order to evade certain regulations on wages and control in the State enterprises, it is observed that the ratio of private capital is being artificially increased in some concerns. For example, a joint-stock company contributed 98 per cent of the capital, totaling 500,000 T.L. for the launching of a limited liability company and opened a credit of 2 million T.L. to the same company. It then got the company to subscribe 3 million T.L. to its own nominal capital and created a situation in which a company was contributing to its own establishment.

c. Administrative Situation

(1) Responsible Organs

Following the modifications made by Law No. 23, the executive and the auditing organs of the State economic enterprises and similar establishments are as follows :

The General Council

The Ministries

The High Control Board

The Board of Directors

The Director General

In some cases, the power of Ministries over State enterprises is incompatible with the independence that such organizations should possess. Often the enterprises are not attached to the most suitable ministry.

(b) The Directors' Council, created by Law No. 23, is the decision-making body for each State Economic Enterprise. The chairman of this council is the director-general, who is the chief executive of the enterprise.

(c) Atlhough the duties of the General Directors are to conduct all business within the framework of the regulations and in conformity with economic and commercial requirements, the frequent change-over of directors has been extremely damaging. In the last ten years, eight directors-general in the Etibank and the State Railways, seven in the Iron-Steel Enterprises, five in the Machine and Chemical Industries Corporation and four in the Sumerbank have been replaced.

(d) The High Control Board supervises the administrative, financial and technical activities of the public economic enterprises and similar institutions outside the control of the High Auditing Council. This Board has been tied to the Presidency of the Legislative Assembly by Law No. 23. The number of the enterprises supervised by this Board has risen to seventy. Since, according to Article 127 of the Constitution, the State Economic Enterprises will be controlled by the Turkish Grand National Assembly, the role of the Board is to be reconsidered.

(2) Personnel Situation

The position of employees in the State Economic Enterprises and associated concerns is unsatisfactory in several respects.

(a) Sufficient incentives cannot be provided for such skilled administrative personnel as financial experts, administrators and accountants, whom the State Economic Enterprises need.

(b) Although it may be contended that technical personnel is better remunerated than others, the disparities in the salaries of technical staff of the same grade recruited at different times and of permanent and temporary employees show that this state of affairs is unsatisfactory.

(c) The system of recruitment has not prevented the employment of unsuitable people through the exercise of influence and recommendations.

(d) The fact that bonuses are paid regularly and according to a fixed scale means that they do not constitute incentives to personnel as they should in economic and commercial enterprises.

(e) As there are few grades and horizontal promotion is impossible, the officials in the medium and the upper brackets receive approximately the same salary.

(f) As there is a considerable difference in the salaries of administrators working in the private sector and those working in the public economic enterprises, qualified personnel tends to look for employment in the private sector.

(3) External Influences

Although administrative independence, except for general policy decisions, is necessary for the efficient functioning of public enterprises, external influences affect not only questions of recruitment but also have considerable adverse effect on vitally important decision which should be taken by the enterprises, such as establishment of provincial organizations, the choice of sites and participation in other undertakings.

d. Financial Situation

The balance sheets of some public economic enterprises, as of December 31, 1961, are shown in Tables 41, 42, 43 and 44.

(1) Some of the State Economic Enterprises are seen to be short of working and investment capital, to have insufficient liquidity and a tremendous burden of debt. Their net worth accounts for a very small portion of assets. As a result, short and long term debts and interest add up to a large total. Despite the fact that in accordance with law No. 154 some of the consolidated debts have been considered as paid, some public economic enterprises are still short of capital.

(2) Table 45 shows the position of the net worth of some State enterprises in relation to their fixed and total assets as of December 31, 1963.

(3) The balance sheets give the value of fixed assets (buidings, land, epuipment, machinery, etc.) at the time of their acquisition and do not reflect the values resulting form inflation. This situation prevents the improvement of the financing program on the basis of depreciation allowances which would meet replacement needs.

TABLE 41 — Balance Sheets of State Economic Enterprises as of 31 December 1961

(Thousand TL.)

	Etibank		Sümerbank		Turkish Coal Enterprise		Turkish Iron - Steel Enterprises		Turkish Cement Industry	
	TL.	%	TL.	%	TL.	%	TL.	%	TL.	%
I. Fixed assets	936 075	51.78	556 347	33.73	505 517	48.76	607 222	63.18	302 395	66.96
II. Current assets										
Cash and bank accounts	69 080	3.49	33 056	2.00	20 722	2.00	9 605	1.00	7 934	1.75
Inventories	198 400	10.97	699 177	42.39	263 656	25.43	245 100	25.50	37 009	8.20
Accounts receivable	610 310	33.76	360 950	21.88	246 835	23.81	99 115	10.32	99 672	22.07
Total current assets	871 790	48.22	1 093 183	66.27	531 213	51.24	353 820	36.82	144 615	32.02
III. Deficit	—	—	—	—	—	—	—		4 583	1.02
Total assets	1 807 865	100	1 649 530	100	1 036 730		961 042	100	451 593	100
I. Current liabilities (Short - term)	421 933	23.34	440 134	26.69	212 090	20.46	298 521	31.06	102 941	22.80
II. Resources for long - term financing										
Consolidated debts	196 450	10.87	170 715	10.35	126 097	12.16	—	—	112 669	24.95
Long - term debts	516 584	28.57	224 741	13.62	304 104	29.33	166 351	17.31	103 741	22.97
Total liabilities	713 034	39.44	395 456	23.97	430 201	41.49	166 351	17.31	216 410	47.92
III. Net worth										
Paid - up capital	404 203	22.36	500 000	30.31	367 300	35.43	345 315	35.93	118 947	26.34
Contingencies and reserves	180 778	10.00	302 054	18.31	27 139	2.62	87 043	9.06	13 295	2.94
Earned surplus	87 917	4.86	11 886	0.72	—	—	63 812	6.64	—	—
Total net worth	672 898	37.22	813 940	49.34	394 439	38.05	496 170	51.63	132 242	29.28
Total liabilities and net worth	1 807 865	100	1 649 530	100	1 036 730	100	961 042	100	451 593	100

TABLE 42 — Balance Sheets of State Economic Enterprises as of 31 December 1961 (Continued) (Thousand TL.)

	Machine and Chemical Industries Corporation		Cellulose and Paper Factory		Turkish Petroleum Corporation		Turkish Sugar Factory		Nitrogen Industry	
	TL.	%	TL.	%	TL.	%	TL.	%	TL.	%
I. Fixed assets	244 133	17.33	159 766	56.33	187 949	59.56	545 373	24.29	514 353	87.94
II. Current assets										
Cash and bank accounts	10 882	0.77	4 103	1.44	7 422	2.35	8 670	0.39	21 908	3.74
Inventories	385 604	27.37	69 846	24.63	46 314	14.68	1 060 924	47.25	15 929	2.73
Accounts receivable	768 354	54.53	49 928	17.60	73 863	23.41	630 373	28.07	30 552	5.22
Total current assets	1 164 840	82.67	123 877	43.67	127 599	40.44	1 699 967	75.71	68 389	11.69
III. Deficit	—	—	—	—	—				2 163	0.37
Total assets	1 408 073	100	283 643	100	315 548	100	2 245 340	100	584 905	100
I. Current liabilities (Short - term)	716 619	50.86	90 797	32.01	39 201	12.42	630 920	28.10	7 109	1.22
II. Resources for long - term financing	4 553	0.32	—		—		1 085 760	48.36	169 607	29.00
Long - term debts	350 969	24.91	59 505	20.98	10 000	3.17	407 567	18.15	288 185	24.27
Total	355 522	25.23	59 505	20.98	10 000	3.17	1 493 327	66.51	457 192	78.27
III. Net worth										
Paid - up capital	207 864	14.76	84 848	29.91	150 000	47.54	61 600	2.74	120 000	20.51
Contingencies and reserves	113 736	8.07	22 545	7.95	52 762	16.72	28 510	1.27	4	
Earned surplus	15 232	1.08	25 948	9.15	63 585	20.15	30 983	1.38	120 004	20.51
Total net worth	336 832	23.91	133 341	47.01	266 347	84.41	121 093	5.39		—
Total liabilities and net worth	1 408 973	100	283 643	100	315 548	100	2 245 340	100	584 905	100

TABLE 43 — Balance Sheets of State Economic Enterprises as of 31 December, 1961 (Continued)

(Thousand TL.)

	P.T.T. TL.	%	State Railways TL.	%	Turkish Airlines TL.	%	Maritime Bank TL.	%	Transport Maritime Bank TL.	%
I. Fixed assets	237 053	56.13	2 250 025	65.91	111 894	49.00	771 214	59.02	356 440	84.49
II. Current assets										
Cash and bank accounts	19 121	4.52	16 356	6.48	17 331	7.57	14 619	1.11	1 635	0.38
Inventories	61 706	14.62	402 690	11.80	43 834	19.22	115 486	8.84	6 835	1.62
Accounts receivable	104 441	24.73	348 410	10.20	33 721	14.77	405 525	31.03	56 948	13.51
Total current assets	185 268	43.87	767 456	22.48	94 886	41.56	535 630	40.98	65 418	15.51
III. Deficit	—		396.478	11.61	21.553	9.44	—		—	
Total assets	422 321	100	3 413 959	100	228 333	100	1 306 844	100	421 858	100
I. Current liabilities (Short - term)	161 278	38.19	634 600	18.59	74 757	32.74	285 167	21.82	116 979	32.47
II. Resources for long - term financing	21 512	5.09	—		61 425	26.90	177 830	13.61	76 671	18.17
Consolidated debts	23 850	5.65	466 800	13.67	33 036	14.47	247 953	18.97	42 860	10.16
Long - term debts	45 362	10.74	466 800	13.67	94 461	41.37	425 783	32.58	119 531	28.33
Total	176 910	41.89	2 304 913	67.52	59 115	25.89	488 528	37.38	110 000	26.08
III. Net worth										
Paid - up capital	26 364	6.24	7 646	0.22	—		92 514	7.08	44 216	10.48
Contengencies and reserves	12 407	2.94	—		—		14 852	1.14	11 132	2.64
Earned surplus	215 681	51.07	2 312 559	67.74	59 115	25.89	595 894	45.60	165 348	39.20
Total liabilities and net worth	422 321	100	3 413 959	100	228 333	100	1 306 844	100	421 858	100

TABLE 44 — Consolidated Balance Sheets of some State Economic Enterprises as of December 31, 1961*

	Total of Tables 41 - 42 - 43 (TL.) (1)	(%) (2)
I. Fixed Assets	8 914 445	46.56
II. Current Assets : Cash at Bank	391 977	2.04
Inventories	4 133 315	21.58
Accounts Receivable	5 105 569	26.67
Total	9 626 861	50.29
III. Deficit	604 010	3.15
Total Assets	19 145 316	100
I. Current Liabilities (Short-Term)	5 235 157	27.35
II Resources for Long Term financing		
Consolidated Liabilities	2 837 092	14.82
Long-Term Debts	3 339 562	17.44
Total	6 176 654	32.26
III. Net Worth		
Paid-up Capital	6 171 823	32.24
Contingencies and Reserves	1 056 604	5.52
Earned-Surplus	505 078	2.69
Total	7 733 505	40.39
Total Liabilities and net worth	19 145 316	100

* (1) For an analysis of financial structure, the cross-entries and nominal figures on the credit and debit sides have so far as possible been eliminated from these balance sheets.

(2) As the off-setting entries on the credit and debit sides have not been thoroughly checked, these balance-sheets give only a rough, though on the whole correct, idea of the situation of State Economic Enterprises.

TABLE 45 — Net Worth and Fixed Assets of State Economic Enterprises

Name of Enterprise	Net Worth (1000 TL.)	Fixed Assets (1000 TL.)	Total Assets (1000 TL.)	Net worth as percent of fixed assets (%)	Net worth as percent of total assets (%)
Sümerbank	819 940	556 347	1 649 530	146	50
Etibank	672 898	936 075	1 807 865	72	37
Turkish Coal Enterprises	394 439	505 517	1 036 730	78	38
Turkish Iron and Steel Enterprises	496 170	607 222	961 042	82	52
Turkish Cement Industry	132 242	302 395	451 593	44	29
Nitrogen Industry	120 004	515 353	584 905	23	20
Machinery and Chemical Industry	336 832	244 133	1 408 973	138	24
S E K A (Cellulose and Paper Industry)	133 341	159 766	283 643	83	47
Turkish Petroleum Corporation	266 347	187 949	315 548	142	84
Turkish Air Lines	59 115	118 894	228 333	50	26
Maritime Bank	595 894	771 214	1 306 844	77	45
State Railways	2 312 559	2 250 025	3 413 959	102	68
P. T. T. Administration	215 681	237 053	422 321	91	51
Petroleum Office	164 979	34 166	439 460	482	37
Turkish Sugar Factories	121 093	545 373	2 245 340	22	5
Soil Products Office	626 467	459 879	1 315 520	136	48
State Supplies Office	54 319	14 373	41 587	378	38
Meat and Fish Organization	51 837	120 271	710 265	43	7
Maritime Bank Transport	165 348	356 440	421 858	46	39

FUTURE OUTLOOK (assuming present conditions remain unchanged)

If the lack of cooperation among the enterprises continues, if prices are not set according to operating and market conditions, and if the managerial independence of enterprises is not recognized, financial needs will have to be met from other sources in the coming years.

In order to assess the situation in the coming years, tentative balance sheets have been prepared for twenty-two enterprises.

In Table 46 the results are shown by years and enterprises. The calcutions depend on the following assumptions :

a. that the status quo regarding the State Economic Enterprises will continue.

b. that 1963-1967 will not be a period of economic stagnation and that all production will be sold; that there will be no increase in stocks of raw materials and manufactured goods and that stocks will remain at the end 1961 level.

d. that the numbers of workers and personnel will be increased only when technically required; i.e. when existing enterprises are enlarged or new ones founded.

e. that the taxes for 1960 and previous years owed to the Treasury will not be collected, that the unpaid portion of taxes for 1962 will be transferred to 1963 and that taxes for 1963-1967 will be fully collected.

f. that the present level of prices and wages will remain unchanged.

The position of the Workers Insurance, the Pension Fund and the Iller (Provinces) Bank in the next few years is also shown in Table 47.

A general balance sheet of the public enterprises, combining Tables 46 and 47 is given in Table 48.

TABLE 46 — Self-Financing Possibilities of the State Economic Enterprises in the coming years (*)

(Thousand TL.)

Enterprises	1963	1964	1965	1966	1967	Total
Etibank	— 161 691	— 189 405	— 117 455	— 140 049	— 113 278	— 721 878
Sümerbank	— 113 909	— 79 625	— 48 707	— 24 994	— 197	— 267 432
Turkish Coal Enterprises	— 177 100	— 180 290	— 195 219	— 210 021	— 190 254	— 953 684
Turkish Iron and Steel Enterprises	— 144 486	+ 170 194	+ 165 183	+ 159 269	+ 162 643	+ 542 000
Turkish Cement Industry	— 25 681	— 13 113	+ 4 900	— 5 534	+ 5 455	— 33 973
Nitrogen Industry	— 65 007	— 70 800	— 73 001	— 83 896	— 78 698	— 370 405
Machine and Chemical Industry	— 12 381	+ 17 834	+ 15 784	+ 15 796	+ 17 609	+ 54 642
Turkish Petroleum Corporation	+ 47 300	+ 48 453	+ 49 401	+ 51 345	+ 54 780	+ 251 787
Turkish Air Lines	— 51 665	— 28 679	— 17 530	— 13 361	— 12 305	— 223 540
Maritime Bank	— 53 328	— 5 579	— 1 991	— 19 108	+ 6 563	— 73 443
State Railways	— 176 011	— 62 155	— 43 721	— 38 820	— 14 557	— 335 264
P.T.T. Administration	— 84 005	— 12 053	+ 7 215	+ 24 038	+ 35 031	— 29 774
Petroleum Office	+ 14 017	+ 17 817	+ 20 447	+ 23 077	+ 25 707	+ 101 065
Turkish Sugar Corporation	— 95 402	— 73 959	— 68 712	— 90 545	— 58 669	— 387 267
Soil Products Office	— 11 800	— 5 900	+ 7 100	+ 7 900	+ 10 800	+ 8 100
State Supplies Office	— 16 855	— 12 330	— 2 851	+ 1 031	— 642	— 31 645
Meat and Fish Organization	— 12 210	— 2 450	— 2 600	— 4 989	— 5 971	— 28 220
Maritime Bank Transport	— 8 000	— 2 000		+ 2 000		— 8 000
Agricultural Supplies	— 6 820	— 2 630	+ 3 730	+ 4 730	+ 5 830	+ 10 100
Wool and Mohair	— 1 000		+ 80	+ 300	+ 600	— 100
Raw Rubber Industry	+ 264	+ 220	+ 202	+ 173	+ 126	+ 985
Cellulose and Paper	— 35 500	+ 17 880	+ 19 958	+ 18 926	+ 20 087	+ 41 351
TOTAL	**— 1 161 350**	**— 463 293**	**— 277 787**	**— 322 032**	**— 129 330**	**— 2 353 792**

(*) Financial surpluses are marked (+) and deficits (—).

TABLE 47 — Estimates of possible Transfers to the State Economic Enterprises from the Worker's, Insurance, the Pension Fund, the Iller Bank and the Amortization and Credit Fund

(Thousand TL.)

Enterprises	1963	1964	1965	1966	1967	Total
Workers Insurance	+ 225 000	+ 284 000	+ 312 000	+ 330 000	+ 350 000	+ 1 501 000
Pensions Fund	+ 122 000	+ 117 100	+ 159 090	+ 140 500	+ 116 500	+ 656 000
Iller Bank	+ 51 210	+ 112 725	+ 168 296	+ 162 856	+ 198 423	+ 611 090
Amortization and Credit Fund	—	—	—	+ 100 000	+ 100 000	+ 200 000
T O T A L	**+ 295 790**	**+ 513 825**	**+ 640 196**	**+ 753 356**	**+ 764 923**	**+ 2 968 090**

TABLE 48 — Overall Financial Situation of the State Economic Enterprises and Similar Establishments

(Thousand TL.)

	1963	1964	1965	1966	1967	Total
Profit	159 180	272 690	279 345	304 880	348 080	1 364 175
Resources	642 628	703 135	736 247	859 964	882 087	3 834 061
Instalment of Foreign Debt	279 910	233 442	721 279	770 462	808 456	3 575 550
Accounting Expenses	608 801	666 552	1 736 871	1 935 306	2 038 623	8 763 786
	1 410 609	1 642 377	192 175	186 410	125 354	1 017 291
Shares to be paid for	5 887	—	—	—	—	5 887
Corporation Tax, Savings Bonds	212 589	214 004	261 779	281 791	299 604	1 269 767
Dividends	30 378	30 781	34 770	37 226	40 979	174 134
Instalment of Internal Debt (To the Treasury)	12 480	13 960	15 440	16 920	18 785	77 585
Instalment of Internal Debt (Amortization and Credit Fund)	140 352	145 146	172 067	281 203	267 530	1 006 298
Instalment of Internal Debt (Foreign exchange premium)	62 857	50 417	50 477	50 557	50 757	265 065
Maintenance Investments and Completion of Investments under way	1 531 716	904 095	647 754	649 875	600 021	4 333 461
T O T A L	2 276 169	1 591 845	1 374 462	1 503 982	1 403 030	8 149 488
Surplus of Deficit in Resources	— 865 560	+ 50 532	+ 362 409	+ 431 324	+ 635 593	+ 614 298

EXPECTED DEVELOPMENTS IN THE STATE ENTERPRISES DURING THE PLAN PERIOD

In order to realize the target rate of growth, the State Economic Enterprises will be responsible for carrying out a major part of the investments visualized. For the success of the the plan, enough funds must be created by these enterprises to cover the expenditures from unidentified sources mentioned in the macro-plan. Although these enterprises, with the means of production and the experienced personnel at their disposal, could generate still more funds with proper organization, they will not be able to attain even the desired level if conditions are not revised. The proposed reorganization will therefore be very carefully studied.

These enterprises have engaged in various fields of production in the past and their activity has stimulated a market which was lacking in capital and initiative; their aim was to supply domestic needs. They also set an example to many private enterprises and served in training many managers for private enterprise.

The problems they face today are not the same as those in the years of their foundation. These firms are now well established, have connections on the internal and external markets and have wide experience. Due to influences beyond their control, however, these enterprises have become inefficient in many respects and must be reorganized to be of greater value to the economy. The State enterprises must be able to finance their own development in addition to carrying out their present functions in a satisfactory manner.

The funds invested in the setting-up and development of the enterprises should now raise new resources for the economy. This will be possible by achieving high production levels at low costs and by adjusting methods of sale and distribution to market conditions.

Working conditions must be reorganized along modern lines to attain high production levels. By eliminating external influences which are contrary to sound management, it will be possible to conduct operations according to market and to avoid unnecessary expenses.

In addition to capital and manpower the enterprises have :

(a) Experience in production and the founding of establishments in various fields;

(b) Experience in carrying out research in new branches of production which must be developed, and possibility in view of their large capital, of taking risks when necessary;

(c) Large distribution networks and the advantage afforded by nationwide organizations;

(d) Connections in foreign markets as purchasers and sellers of capital goods;

(e) Commercial experience acquired through their work and contacts with the people in the different regions of the country;

(f) Training facilities and experience;

(g) All other advantages of being large-scale enterprises.

WORKING PRINCIPLES

To make the most of these advantages the enterprises must be managed on modern lines and in accordance with market conditions. The resulting gain will make itself felt on the whole of the economy.

(a) Existing establishments must operate at the most appropriate level of production in order to reduce costs.

In this way the output of the goods and services required by the economy will be satisfactory as regards quantity, quality and prices. It will therefore be possible to supply raw and semi-processed materials at suitable prices to home industries, whether public or private; to produce manufactured goods that are competitive on internal and external markets; to reduce import and increase exports, to produce low-cost inputs which help to raise productivity in agriculture and other sectors; and to offer final consumer goods at reasonable prices.

(b) Profits must be raised to the highest possible level in conformity with the conditions applying in a free market.

Undue wear will be prevented by providing for maintenance and repair at the proper time; research and development studies will be intensified; investment expenses will be self-financed, thus relieving the burden on the budget; wage and salary-earners will be provided with facilities so that their work may be better remunerated; credit agencies in the fields of agriculture and tourism will be expanded the extent of credit granted will be increased from year to year.

(c) The investments the State enterprises must be financed from their own resources or based on other sound means of financing.

This will prevent the recurrence of inflation, the negative effects of which still persist to this day, induce balanced investments, and prevent high establishment costs due to unduly long construction period.

(d) Cooperation similar to that established between the Sugar Factories and the agricultural producers must be provided in other fields where applicable.

This will result in higher productivity and products of better quality particularly in animal husbandry. The adoption of similar arrangements in other farm sectors will help to increase output and ensure that producers obtain better return for their products.

(e) State enterprises should undertake directly or indirectly the investments in undeveloped sectors visualized in the plan, thus providing for balanced development.

(f) It must be ensured that the enterprises make their purchases at appropriate times so that the interests of both producers and consumers are safeguarded and excessive profits by intermediaries are eliminated.

(g) Quality control and marketing should be organized on modern lines, and it should be ensured that the goods sold on foreign markets are of the required quality and delivered in time.

(h) In order to ensure the distribution of basic goods and services through out the country, efficient distribution and marketing systems must be set up.

REORGANIZATION

To be able fulfill the functions assigned to them, State enterprises must be reorganized in accordance with the following principles :

(a) To ensure rational and productive work at the management level, enterprises will be managed on aotonomous lines;

(b) State enterprises and their resources will be considered globally as an instrument for the realization of development objectives and a common fund will be set up for the purpose of directing resources to various fields.

(c) New arrangements will be made which will promote unity in working and control methods and other administrative matters and ensure coordination in investment, production, sales and purchases, and cooperation in the use and exhange of equipment and personnel..

COMMUNITY DEVELOPMENT

BASIC PRINCIPLES AND METHODS

a. One of the best methods of achieving long term planned development in a country is to create conditions which are conducive to the growth of community structure and help in promoting correct values in the people. To achieve this objective, it is necessary to apply the community development methods. Community development involves effective working of various services, implies setting up of new institutions and cooperatives, and stimulates cooperation between the administration and the people. Its technique lies in training people and making them work on cooperative lines which will ensure realization of desired changes in the structure of the community and will mobilize social forces so as to make them creative. This method which is based on the voluntary participation of the people, their association with adminisration and their willing contribution to the activities of the State in certain fields is today widely applied in democratic countries. Community development enables adoption of measures which prevent unnecessary wastage of manpower and resources, encourages the people to participate on a voluntary basis in the performance of services and ensures that the benefits accruing from these services reach a larger number of people. Furthermore, the community development programs have the effect of ensuring a more efficient discharge of different technical services provided to the villages. Implementation of community development programs in accordance with the structure and needs of the community also results in bringing about greater integration in the services to be performed and investments to be made in villages.

b. One of the country's social problems that needs special attention is over population in the agricultural sector. The high rate of population growth makes the problem increasingly serious. Manpower requirements resulting from the investments to be made in industry and services in order to secure a 7 per cent rate of growth will not be sufficient to absorb this growing population and provide jobs for all those who are now unemployed or underemployed. Moreover, the studies made have shown that it will not be possible to use additional manpower in agriculture in order to achieve the agreed production targets. It has been calculated that in fifteen years' time, the net surplus manpower that cannot be employed will be around 700,000. Hence it is necessary to apply special methods for solving such problems which cannot otherwise be solved within the normal framework of development. One of the methods that may be adopted in this regard is to create special fields of activity which will increase the productivity of manpower in the agricultural and non-agricultural sectors and simultaneously secure the voluntary cooperation of the people in the works and investments to be made and thereby accelerate the possibilities of growth in the society.

c. A basic condition for developing agriculture and increasing production is to ensure that the people working in farms adopt rational working methods. Hence the need to encourage education; agricultural training and particularly cooperative movements are necessary conditions for the development of this sector. These can be effectively ensured by initiating a community development program.

PRESENT CONDITIONS

In Turkey, the Ministries of Interior, Education, Agriculture. Public Health, Public Works, Industry and Commerce, together with other public agencies endeavour to provide different types of services for the benefit of agricultural communities. Several experiments have also been made in the past to support the works already being done by these agencies and to make the necessary desired changes in the structure of the community. These experiments have to some extent been similar in purpose and methods to community development. They stressed the adoption of methods which would increase the knowledge of the peasants, improve production techniques, help in mobilizing resources and establish collaboration among communities.

But the study of some of the above mentioned works, wheather completed or continuing, reveals the following facts :

a. Lack of coordination at the administrative level. The ministries and their departments carry out similar activities in the same field unaware of each others' programs. This causes unnecessary waste of manpower and means.

b. The same confusion and lack of coordination is observed in the contents and methods of the programs.

c. The experiments made and results obtained are not evaluated systematically. Therefore, basic working methods cannot be improved and productivity cannot be increased.

d. The work done by various public organizations to secure the people's participation in the services, and in the investments related to these services and to encourage cooperative activities among them, is limited, scattered and ineffective.

e. The method followed up to now in the implementation of public services has been to leave the performance of these services to the care of Government agencies only.

The necessary conditions for obviating some of these findings are the implementation of effective community development programs. Together with certain administrative measures to be initiated in this connection, a few community development pilot projects will also have to be established. As a first attempt in this direction, some pilot work has been undertaken in the province of Muş, and this work is continuing. In this province, the State Planning Organization tried to secure coordination among the ministries of Education. Public Health and Social Services, Agriculture and Public Works. The local administration is also participating in this work to a large extent.

The pilot activities required to be carried out es follows :

(1) Reinforcement of provincial administrative personnel.

(2) Organization of a special training program for the personnel at different levels of provincial administration.

(3) Formulation of criteria to select villages for pilot activities, adoption of programming methods to be followed and standardisation of the methods of evaluating the work done.

(4) Provison for regular supervision of this work and based on its experiences and result, finalization of the organizational pattern for community development. Thus the main lines of nationwide community development programs will also be laid down.

FUNDAMENTALS OF COMMUNITY DEVELOPMENT PROGRAMS

Handling the various problems as a whole and trying to solve them not separately but all together, ensures that resources are used profitably and that results are obtained speedily. The aims of the community development program are to determine the needs and problems of communities, to organize Government services with a view to solving the problems of the communities in accordance with a suitable overall program, to initiate the communities into action, and to establish in them the habit and attitudes of seeking local resources for the realization of their development.

In various countries, special organizations have been set up to achieve these aims. These organizations pursue, separately or in common according to the problems and needs of their communities, the objects of developing efficient production techniques, providing instruction, fighting against diseases, promoting cooperatives and ensuring full employment.

The manner in which these aims could be achieved in Turkey should be considered within the overall framework of Turkey's administration and its long-term program. There is already a widespread administrative organization in Turkey which performs services for local communities. The number of State officials engaged in various activities connected with villages is at present above 70,000. Therefore setting up of a new organization for community development, parallel to the one already existing would lead to duplication on a large scale. Accordingly community development should be taken up with the object, not of creating a new organization but of completely reorganizing the existing set-up. Since the existing organizations are meant to carry out programs which are similar, in their aims and principles, to those of community development, a reorganization of present services to meet the requirements of community development should be relatively simple.

The principles and targets of the reorganization to be undertaken may be as follows :

a. Principles :

(1) To ensure that all work relating to community development will be conducted jointly be different departmental personnel in accordance with the common principles of community development which will be in conformity with the structure of the community

(2) To have importance attached to the voluntary participation of people in the implementation of the programs prepared on the basis of common principles and targets.

(3) To secure closer cooperation between the people and the administration, and to have administrative personnel and community leaders specially trained.

(4)To have all works regularly evaluated with reference to targets fixed and results achieved.

b. Targets :

The basic targets of the community development programs, which will help to mobilize the present energy potential for socio-economic development, may be as follows :

(1) To ensure that local communities understand the problems which confront them, seek coordinated solutions, mobilize their resources and assist the administration to frame programs for their benefit.

(2) To train people to adopt better methods of work in different fields of activities and thereby raise productivity and production.

(3) To raise the general productivity and lower the cost of various services.

(4) To aim at the full utilization of labor in investment programs, and to prepare special programs for utilizing excess labor.

(5) To eliminate the problems inherent in the distribution of services to village communities, which at present lie scattered in small units. This scattered distribution in small units makes for unnecesarry installation of a large number of services, adds to their cost and leads to a fall in their efficiency and productivity. A rational policy for bringing services to villages should therefore be framed together with a settlement policy, which takes into account rural establishment and structure. However, this subject should be considered in relation to the determination and solution of numerous other complex problems. Community development programs will be a basic instrument for the investigation of these problems and for taking appropriate measures for their solution. As a step in this direction, the studies already undertaken to obtain the necessary background information for measures to improve the settlement questions of village units during the plan period should be accelerated.

CONCLUSIONS

The findings of certain surveys have revealed that the people are generally prepared to contribute voluntarily to the investments undertaken in villages. Since they feel that in this way their needs are met more quickly than otherwise, they show a great willingness to participate in the work programs of the Government. It is therefore the duty of the Government to channel this willingness of the people to help to achieve specific objectives more efficiently within the overal framework of the plan.

The projected increase in agricultural production also depends to a large extent on the implementation of community development programs.

Since providing the essential requirments of villages through State funds only would need a long time, it is necessary to encourage people to contribute by their efforts to governmental investments and thereby to increase the total volume of investments and ensure achievement of targets in a much shorter time. The working of an effective community development program will secure the participation of people in services on a voluntary basis, and in this way it is possible that the voluntary contribution of the people may go up to about 30 per cent of investment expenditures in the last years of the plan period.

Various public agencies are also providing services to villages and incurring considerable expenditures. By application of community development methods, better results will also be obtained from these investments.

The solution of the problem of the unemployed which according to estimates will reach the number of 700,000 by 1977, will be greatly helped by the implementation of community development programs. The effective implementation of community development programs can prove to be one of the most important measures to help create meployment outside of agriculture in rural areas and thus prevent the population from migrating to towns faster than jobs can be created for them.

In addition to the benefits of the community development program which can be gauged in figures, others relate to creation of full employment for under-employed labor, the adaptation of farmers to the conditions of non-agricultural occupations, the improvement of production techniques and the raising of social standards.

Measures will be taken to implement the community development program in all provinces in the five-year plan period, but the programs will not affect the whole of every province. It will be only in the 1967-1977 period that community development programs will be implemented on a scale which will embrace all villages.

LABOR AND LABOR PROBLEMS

INTRODUCTION

Industrialization can be considered from two points of view. From the general point of view, industrialization means accumulation of capital, increase of production and productivity, and promotion of general welfare. From the specific point of view, it means a rise in the level of employment, and the expansion of a social group that earns its living by work.

In order to establish an equilibrium among the social classes, it is necessary that the workers who have an important role to play in the realization and continuation of development, should enjoy the same economic and social rights as other categories. The rights of the worker must be recognized and he must be conscious of the important part he plays in the economy as a member of the community and not just as an important factor in production. This is indispensable for obtaining the harmonious relations and close cooperation between capital and labor, on which planned development depends in a democracy.

The participation of labor in the search for solutions to social and economic problems is a natural consequence of the democratic system. Democracies have, through the liberty of association and organization which they ensure, made possible the establishment and development of progressive organizations which have helped labor to attain this social equilibrium.

Workers have now become conscious of their functions and responsibilities in the process of development. It is therefore necessary that workers' organizations which are an essential element of industrial democracy should be strengthened and assisted.

PRESENT STATUS AND PROBLEMS OF TRADE UNIONS

The number of trade unions have increased rapidly and many unions have been formed in the same branch of industry and even in the same establishment. However, there has not been a corresponding rise in the number of trade-unionists. There are approximately 450 trade unions and 300,000 trade-union members at present. The latter constitute 25.7 per cent of the workers employed in the industrial sector. As too many trade unions have been set up and the labor force has thus been divided, the movement of trade unionism has not been able to develop and it is difficult for the unions themselves to perform their functions. If trade unions are to fulfil the social functions expected of them, it is essential that they unite. It is hoped that the unions will soon realize this and begin to emerge.

Trade unionism in Turkey is relatively new. The existing unions have however succeeded in producing qualified leaders in a short period of time. It is expected that leadership will progress in line with the development of trade unions in the future.

The present number of syndicated workers is low. There is however a general tendency on the part of workers to join unions in the regions and establishments where such union are powerful and fulfil their functions within their rightful limits. One can expect a considerable increase in the number of syndicated workers in the coming period in step with the granting of new rights to trade unionism, and its emergence as a more powerful force.

EMPLOYER - EMPLOYEE RELATIONS

In an under developed country which aims at attaining a higher general standard of living through sharing of the increased national income in accordance with the principles of social justice, the importance of using labor, whenever possible, in the place of the already insufficient capital is obvious. To do this, a spirit of cooperation must exist in industrial relations, ensuring the most effective participation of labor in the process of production. This cooperative spirit will be induced by the general application of social justice principles, the recognition of the fact that industry as a whole serves the public, and harmonious employer-employee relations. Trade unions, which have great responsibilities in this respect, are expected to contribute to the strengthening mutual understanding between employers and employees.

The necessary conditions for harmonious cooperation between employers and employees are the following :

a. The rights of labor to negotiate and bargain with employers on equal terms will be recognised, solidarity of interest based on principles of social justice will be created between workers and employers and the basic right of collective bargaining and strike and lock-out will be legally established in order to help the development of unions on the one hand and democratic practices on the other.

b. Unsatisfactory or out-of-date regulations and agreements dealing with bargaining and arbitration in labor disputes will be amended. A stop will put to unilateral wage-fixing and the practice of considering minimum wage rates a the upper ceilings beyond which wages should not be raised. Labor will take an effective part in the determination and revision of working conditions, such as working hours, paid holidays etc.

PRODUCTIVITY

One of the basic principles for increasing productivity is the establishment of good relations between employers and employees and the settlement of working conditions within such a framework. With this in view, the attempt to secure a more productive use of existing capacity will be concentrated on the following two aspects.

a. Organization

Arrangements will be made to encourage the adoption of modern organization methods and job evaluation techniques in work-places with a view to promoting specialization and effective cooperation, work simplification and preventing falls in productivity due to seasonal causes or other fluctuations by planning and controlling production. Workers will not suffer from the application of job analysis methods. Trade unions will have the possibility of negotiating a change in the wage rates settled on the basis of job analysis.

b. Personnel Policy

(1) Beginners and unskilled workers will receive training. They will benefit, in this connection, from the assistance of trade unions, employers and public authorities.

(2) Foremen etc. who are in direct contact with workers will be educated in human relations.

(3) Workers will not be employed in fields other than those of their specialization.

(4) Increases in the minimum wages settled for regions and grades in accordance with the principles of social justice, will be tied to productivity. The adoption of wage systems which stimulate productivity will be supported. The selection of wage systems, which may vary with the conditions of different industries, will be a matter for collective bargaining.

RESEARCH

Research will be carried out on various labor matters with a view to establishing a clear labor policy. The resuls of this reseach will be coordinated and appraised. A bureau for provinding employers and empyloyees with reliable and useful statistical information will be set up.

The situation of employment, employment policy and wages in the plan period are dealt with in detail in the related chapters.

SOCIAL SECURITY

BASIC PRINCIPLES

The realization of social justice is pursued together with that of economic development in the plan. Social insurance will contribute to the achievement of this objective. Social insurance schemes answer the age-old need of people to face the future with confidence. This need is inherent in all social groups; however, differences in wealth among these groups account for different security needs. This need is more pressing and intense in wage-earners who only rely on their work for their livelihood. Insurance systems originally started for workers have gradually taken the form of extensive social security organizations aiming at the solution of social problems in advanced countries. In the broadest sense, social insurance can be conceived as a mechanism that tends in time to redistribute income, and contributes thus to the realization of social justice.

In an under-developed country like Turkey the need for social security is especially pressing as the distribution of an essentially low national income is far from being equitable. It is therefore one of the goals of the plan to extend the scope of social security parallel to economic development, so that it will be able to meet the needs of the country.

As the assistance provided by social security has a steadying effect on final demand, its importance in a developing economy as a stabilizing factor and in reducing fluctuations in economic activities is more and more recognized. A comprehensive social security scheme which leads to greater labor mobility will also help to improve the structure of industry.

In addition to this, social security organizations which collect insurance premiums from employers and employees are also important with regard to creating investment resources. The premiums collected from employers and employees increase total savings.

OBJECTIVES

The targets to be attained with regard to social security in a fifteen-year perspective are the following :

(a) The establishment of a general social security scheme with health and old-age insurance for all citizens.

(b) All social security schemes will be integrated. The special status or rights of former insurants will be taken into account in this integrated scheme.

(c) Self-employed members of the liberal professions, tradesmen and artisans will have to pay the whole of the premium to be included in the scheme.

(d) Unemployment insurance will be provided for those who have the status of permanent workers.

(e) Insurance funds will be administered in accordance with development objectives and the concept of insurance, so that the commitments to be met from these funds can be discharged on a steady and reliable basis.

PRESENT SITUATION

Social security functions are at present performed by three main institutions :

(a) The Workers Insurance,
(b) The Pension Fund which grants (old-age) pension to civil servants and
(c) The Army's Mutual Fund.

The medical assistance granted to the needy by the State should also be considered as part of the social security mechanism. Although there are some semi-Provident Fund schemes outside these institutions, they are gradually being integrated in the Workers Insurance and the Pension Fund.

The Workers Insurance which is the only institution performing social security work in its broadest sense, constitutes the nucleus of social security activities. These activities are carried out in conformity with the principles laid down by the Labor Act of 1936. According to these principles the Workers Insurance insures against labor accidents, occupational diseases, old-age, temporary disablement and illness. Different methods of financing and accounting, and different actuarial calculations are used in these various branches. There is no insurance against unemployment which is an important problem for an economy in course of industrialization. The Workers Insurance extends to the work-places and regions covered by the Labor Act. According to this Act, the manual or non-manual workers employed in establishments of less than four workers — in cities with a population above 50,000 — and less than ten workers — in cities with a population below 50,000 — do not come under the scope of the Workers Insurance. Furthermore, the Workers Insurance does not apply to agricultural laborers, members of the liberal professions, tradesmen and their apprentices, household employees and non-manual workers.

Because of their special status, some workers are not covered by the Workers Insurance, thought they qualify as workers and the establishment were they are employed comes under the scope of the Labor Act. They are the workers employed in the State Railways (about 11,000 in number) and in military factories (about 35,000). These workers are protected by their own social assitance organizations. However under the Pension Fund Act, these workers and their acquired rights will be transfered to the Workers Insurance.

Since 1952, workers in the printing and newspaper industries, and crews of ships of a certain gross tonnage and above are covered by the Workers Insurance.

The establishments covered by the Workers Insurance Scheme increased from 10,361 in 1951 to 19,466 in 1955, and to 36,568 in 1961. In this last year the number of workers covered by the Scheme amounted to 869,000. An additional 36,000 workers benefit from the contingency funds of the State Railways and of military establishments. Accordingly, 29 per cent of a population of 2.5 million wage and salary-earners (excluding agricultural laborers) are covered by social insurance. If about one million agricultural laborers are added to these figures, the ratio of the insured is still lower. The funds invested between 1950-1960 by the Workers Insurance (the nucleus of social insurance) and by the Pension Fund which is only concerned with pensions amounted to 2,862,795 million TL. According to estimates, the Pension Fund and the Workers Insurance will be able to supply, between 1963 and 1967, an additional 2,9 million TL.'s worth of investible resources. The newly founded Army's Mutual Fund will also supply each year funds of approximately 60 million TL. in the same period. These sums will account for 5.3 per cent of total investments in the 1963-1967 period.

MEASURES

a. The ratio of workers benefiting from the protection provided by social security measures will be increased during the plan period. A general system of insurance founded on a sound organization, however, can be realized only after a long phase of preparation. Therefore, the extension of insurance to all industrial workers will be given priority during the first five-year period.

b. The Worbers Insurance, as the nucleus of social security, is seen to have been founded for a particular social group. Social security should however apply to all groups of the community. For this reason, the aim is to institute a new and general social security system by integrating the Worker Insurance and the other existing assistance institutions and funds.

c. The possibility of creating unemployment insurance for those who qualify as regular workers will be examined. For the proper functioning of this scheme, there will be need to develop the Employment and Placement Agency and establish close cooperation witn trade-unions and the Social Security Organization.

d. The purpose of social security is to relieve with the help of the funds contributed by employers, those who have fallen into abject living conditions as a result of pnysical or social misfortune. Social security work is an indivisible whole; therefore the functioning of seperate insurance branches is not consistent with the conception of social security and also leads to administrative difficulties. The various forms of insurance provided by the Workers Insurance will be united under a single social security system.

e. The posssibilities of including agricultural laborers and farmers in the social security scheme will be studied.

f. Starting with the larger cities, it is intended to provide old-age and death insurance for the self-employed and for artisans and non-manual workers.

In view of the scant resources available and present administrative problems, it will not be possible to set up a social security scheme covering all groups and individuals in the immediate future. A general social security system will therefore have to be gradually established on the basis of the preliminary measures stated above. All the necessary preparatory studies will be started immediately.

One of the most important features of social security is that it will provide security and stability in employment. The employment policy of the plan is based on the realization of this aim.

CREDIT INSTITUTIONS

Credit institutions and the credit mechanism perform a most important function in modern economic life. The realization and maintenance of a high level of production depends on the existence of a credit mechanism which is capable of meeting the credit needs of the economy.

Monetary policy, which is one of the basic instruments of the economic and financial policy of the government, may be effectively implemented through closely coordinated institutions.

The level of investments, which is the essential basis of development efforts, depends (other things being equal) on the volume of savings. It is therefore vital for economic development that individual savings should be gathered together and channelled into the desired directions. These are the functions of credit institutions.

The improvement of credit institutions is therefore considered an integral part of development programs and an important factor for the successful implementation of these programs. A credit mechanism which cannot keep in step with the rate of economic growth will slow down development activities and prevent the growth of the economy in the desired directions.

OBJECTIVES

Credit institutions and the credit mechanism will be improved within the framework of the plan and developed so as to encourage savings. The goal is to set up an organization capable of meeting the needs of the money and capital markets. The credit mechanism will be organized so as to channel investments into the areas which will contribute to realization of the plan objectives. Credit institutions will be reorganized to meet working capital needs in a way which will assure the best use of existing productive capacity. Sound financial resources will be made available in order to avoid the emergence of inflationary pressures.

PRESENT SITUATION

In the main, the present banking system has come into existence since the proclamation of the Republic. The Central Bank of the Turkish Republic is at the centre of this system. Other banks fall into two groups : (1) specialized banks and (2) commercial banks.

Specialized banks engage in activities similar to those of holding companies and administer and manage the entreprises in which they hold shares. These banks also carry out ordinary banking operations.

Commercial banks operate essentially on the money market but also acquire shares in order to use their liquid assets.

In addition, there is keen competition between all these banks to attract deposits. The banking system is lacking in cohesion and there is no centralization of risk. In their present states, these banks are unable to perform the functions of alloting credit according to need. Moreover, they do not abide by sound banking principles. Investment banks are few and inadequate and need to be developed.

MEASURES

1. Measures will be taken to prevent banks from making investments and extending credits that are likely to endanger their liquidity position.

2. Current legislation will be amended so as to facilitate and shorten the repayment of bank loans.

3. Bank reserves and other resources will be adjusted and administered in accordance with accepted price and business policies.

4. Measures will be taken to reduce the fixed costs of banks and to reduce the difference between interest on deposits and on loans.

5. Measures will be taken to facilitate the formation of new investment banks which will be established on sound financial bases.

SECTION IV

OVERALL DEVELOPMENT OF THE ECONOMY

DEVELOPMENT TARGETS AND RESOURCES

The basic economic objective of the five-year development plan is to attain a rate of growth of 7 per cent. This target is based on realistic estimates of the resources that will be available for development purposes. Preliminary studies have shown that the internal resources required for a 7 per cent annual average rate of growth could be generated in the country. It is also assumed that the external resources required to mobilize and direct domestic resources toward the five-year targets will be available. In the last five years annual investments averaged approximately 14.8 per cent of GNP of which 2 per cent was from external sources and 12.8 per cent from domestic savings. In the next five years, avarage investments will increase to 18.3 per cent of GNP of which 3.5 per cent will be financed from external sources and 14.8 per cent from domestic saving. The ratio of external financing to GNP will thus increase by 1.5 per cent over the 1957-1961 average and that of domestic savings by 2 per cent.

This increase of 2 per cent in the share of domestic savings in GNP will represent quite an effort for a country like Turkey, with high rate of population growth and low per capita income. However, it is expected that the economic and social measures formulated in the strategy of the plan will help to attain this target without putting too great a burden on the population.

In order to attain a 7 per cent rate of growth during the plan period, it will be necessary to invest on average 18.3 per cent of GNP per annum.

In other words the coefficient showing the relationship between investment and increases in income is 2.6. This value is the average of the ratios of investments to be made in the various sectors in the plan period to income increase resulting from investments in these sectors, was checked against the capital-output ratios realized in the last few years.

The equilibrium between the expenditures to be made in the five-year period and the resources required for these expenditures was established within the framework of a simple growth model. This model shows the relation between various macro economic values and GNP. Some of these values were calculated on the basis of past trends. Others are in the nature of targets to be attained by action on the lines stipulated in the plan strategy. In the balances established, estimates were made as to the changes that will occur in the macro-economic values during the five-year plan period. In annual programs these balances will be reviewed and the necessary re-adjustments made.

EXPENDITURE TARGETS

Expenditure projections are shown in Table 50. The first column of the table shows the development of GNP on the basis of a steady annual rate of growth of 7 per cent. In a country where 40 per cent of GNP comes from agriculture, however, yearly rates of growth in the national income may vary as a result of weather conditions. That is why the target adopted in the plan strategy is of an average rate of growth of 7 per cent during the five-year period. Actual results should however be very close to the GNP figures given in column 1, if the yearly investments stipulated in the model are fully carried out.

TABLE 49 — Investment and Resources (Billion TL. at current prices)

Years	GNP	Investment	Investment as % of GNP	Current Account Deficit	Current Account Deficit as % of GNP	Domestic Savings	Domestic Savings as % of GNP
1957	30.5	4.0	13.1	0.2	0.7	3.8	12.4
1958	36.1	5.0	13.9	0.3	0.8	4.7	13.1
1959	44.7	7.0	15.7	1.4	3.1	5.6	12.6
1960	49.0	7.8	15.9	1.2	2.4	6.6	13.5
1961	49.2	7.5	15.2	1.4	2.8	6.1	12.4
1957-1961	Average		14.8		2.0		12.8
1963-1967	Average		18.3		3.5		14.8

TABLE 50 — 1963 - 1967 Expenditure Targets

(Billion TL. at 1962 prices)

Years	GNP	Private Consump- tion	Private Invest- ment	Current Public Expen- diture	Public Invest- ment	Current Account Dificit	Total Invest- ment
1962	52.7 =	38.6+	3.5+	7.6+	5.1—	2.1	8.6
1963	56.4	40.5	3.8	8.6	5.8	2.3	9.6
1964	60.3	43.0	4.2	9.0	6.6	2.5	10.8
1965	64.5	45.4	4.7	9.5	7.1	2.2	11.8
1966	69.0	47.6	5.3	10.5	7.8	2.2	13.1
1967	73.9	50.2	5.9	11.5	8.4	2.1	14.3
			As % of GNP				
1962	100	73.2	6.0	14.4	9.7	4.0	16.3
1963	100	71.8	6.7	15.2	10.3	4.1	17.0
1964	100	71.3	7.0	14.9	10.9	4.1	17.9
1965	100	70.4	7.3	14.7	11.0	3.4	18.3
1966	100	69.0	7.7	15.2	11.3	3.2	19.0
1967	100	67.9	8.0	15.5	11.4	2.8	19.4
		Average Annual Increase (%)					
	7.0	5.4	11.0	8.7	10.6		10.7

PRIVATE CONSUMPTION EXPENDITURES

Private consumption expenditures will increase at a slower rate than GNP as an increasingly larger share of GNP will be channeled into investments in the plan period. Private consumption expenditures which amounted to 73.2 per cent of GNP in 1962, will fall to 71.8 per cent in 1963 and to 67.9 per cent by 1967. The measures to be taken to limit to 5.4per cent the rate of increase of this expenditure in the next five years are explained in the related sections of the plan.

PRIVATE INVESTMENTS

Past investment series do not reveal a specific trend. The volume and distribution of private investment in recent years was largely influenced by inflation foreign trade restrictions and the political sitution. Private investment in past years varied between 6-7 per cent of GNP and averaged 7 per cent in the last three years. This is expected to reach 8 per cent by the end of 1967.

Private investment, which amounted to billion TL. 1961, is expected to reach 3.8 billion TL. in 1963 and 5.9 billion TL. in 1967. The average annual rate of increase during the plan period is estimated to be 11 per cent. The increase in production and economic activities to result from planned development is expected to stimulate private investment. This, together with the measures of encouragement to be taken, should make it possible to realize investment targets in the private sector.

Private, investment also includes housing investments. In the last three years, private investments in housing averaged 57 per cent of the total. In order to attain the development objectives set for the next five years housing investments will have to be kept within certain limits and the private sector encouraged to invest in more productive fields. Total housing investment in the plan period is expected to increase by a yearly average of 7 per cent while total productive investment will increase by 17.3 per cent. The ratio of private housing investment to total private investment will fall from an average of 52 per cent in the plan years to 47 per cent at the end of this period. The increase of productive investment at a faster rate than housing investment will mean diverting a higher proportion of private saving to industrial fields. The fields of activity to be created by planned development will open up attractive fields of investment for the private sector in industry. As a result of the financial measures to be taken and the policy to be applied in regard to housing credits, the construction of luxury dwellings will be less profitable than in previous years and private savings will be necessarily diverted to other fields of investment. Furthermore, measures will be taken to improve the capital market in Turkey and, consequently, certain funds and small private savings in particular, which were formerly invested real estate, will be channelled into industry.

CURRENT PUBLIC EXPENDITURES

As may be seen from Table 50, current public expenditure is expected to rise from 8.6 billion TL. in 1963 to 11.5 billion TL. 1967. The share of these expenditures in national income will rise from 15.2 per cent in 1963 to 15.4 per cent at the end of the period.

The breakdown of current public expenditure is shown in Table 52. The goal is to keep to a minimum the rate of increase in all public expenditure, other than in the fields of education, health, and research where expenditure contributes a great deal to development. As seen in column 1 of Table 52, current "development" expenditures show a rapid increase from 2.06 billion TL. in 1962, to 4.10 billion TL. in 1967. The average annual rate of increase in current development expenditure will be as high as 15.1 per cent. This will lead to an annual average rate of increase of 8.4 per cent in total current public expenditure during the plan period. (The annual rate of increase in current public expenditure is shown as 8.7 per cent in Table 50). This difference is due to the fact that debt repayments in Table 52 are included under private consumption expenditures in Table 50. Table 52 shows that "other" current expenditure as distinct from "development" expenditure in the General and Annexed Budgets, is expected to increase annualy at the rate of 6.3 per cent. Current expenditures of both general and annxed budgets and local administrations are to increase at the lowest possible rate consistent with the development of public services in the plan period.

PUBLIC INVESTMENTS

Public investment in the five-year plan period has been determined in relation to the total investment targets set in the plan and to the investments expected to be undertaken by the private sector in the same period. In other words, the public investment targets in Table 50 have been set at the levels required to make a 7 per cent balanced rate of growth possible. The share of public investments in GNP will grow, at an annual rate of increase of 10.6 per cent, from 10.3 per cent in 1963 to 11.4 per cent in1967. In the same period private investment will increase annually by 11 per cent and rise from 6.7 to 8 per cent of GNP. An effort of about the same magnitude is thus expected of the public and private sectors during the plan period.

Total private and public investments are shown in column 7 of Table 50. Total investment increases at the annual rate of 10.7 per cent during the plan period and rises from 17.0 per cent of GNP in 1963 to 19.4 per cent in 1967. This shows that investments will increase gradually during the plan period. The average of 18.3 per cent for the plan period will be reached in 1965. The increase in the ratio of gross investment to GNP, while the latter grows at the rate of 7 per cent per annum, shows that the capital-output ratio will rise in the plan period. This ratio which is less than 2.6 at the beginning of the plan period will be higher at the end of the period. This is because there is a certain amount of unused capacity in some branches of industry. For example only 30 per cent of the existing capacity in the textile industry is being used. The capacity used in the machinery and tools sector is between 30 to 35 per cent. There is also idle capacity in the transportation sector.

Certain complementary investments in the first years of the plan will lead to the elimination of bottlenecks and it will be possible to obtain more output from present capacity. With the reorganization of the State Economic Enterprises, and as a result of the measures to be taken to increase productivity in agriculture and industry, it will be possible to ensure higher output in the first years of the plan period. The capital-output ratio expresses the values obtained as a result of sector studies; the productive capacity which is not being used today has been taken into consideration in sector programs. While the ratio of groups investment to GNP will rise in the five-year period, GNP itself is expected to rise annualy by 7 per cent as from the first year of the period.

CURRENT ACCOUNT DEFICIT

The estimated current account deficit in the plan period is shown in Table 50, column 6. Import and export which determine the current account deficit, and revenue and expenditure on invisible items, are shown in the balance of payments table in the relevant section.

The current account deficit shows the net requirements in foreign financing of the five year development plan. Foreign debt repayments in, the plan period are not included in these figures. Gross requirements in foreign financing, which include foreign debt repayments are shown in the balance of payments table.

Turkey's total net foreign financing needs in the five-year period amount to 11.3 billion TL. or 1.26 billion dollars. The annual deficit averages some 2.2 billion TL. The foreign deficit will, however, fall from 41 cent of GNP in 1963 to 2.8 per cent in 1967.

PUBLIC REVENUE AND PRIVATE INCOME

Target figures for public revenue, as shown in Table 51, column 6, increase annualy by 9.4 per cent (In Table 53, column 8, the annual rate of increase in public revenue is shown as 9.3 per cent due to the inclusion of debt repayment in current public expenditure.) The share of public revenue in GNP increases from 24.1 per cent in 1962 to 26.9 per cent in 1967. The breakdown of public revenue targets is given in Table 53.

The private income figures in column 7 of Table 51 are the sum of the private consumption and private investment expenditure figures in Table 50. The share of private income in GNP will fall from 78.5 per cent in 1963 to 75.9 per cent in 1967. This decrease is due to a slower rate of increase in private consumption expenditure than in GNP. However, in absolute terms, prive consumption expenditure will increase from 40.5 billion TL. to 50.2 billion TL. in the plan period. The average rate of increase of private income during this period is 5.9 per cent.

TABLE 51 — 1963 - 1967 Revenue Targets (Billion TL. at 1961 prices)

Years	GNP	Taxes	Other Public Revenue	Private Income	Current Account Deficit	Total Public Revenue	Private Income	Current Account Deficit
1962	52.7=	7.7+	5.0+	42.1—	2.1=	12.7+	42.1—	2.1
1963	56.4	9.0	5.4	44.3	2.3	14.4	44.3	2.3
1964	60.3	10.1	5.5	47.2	2.5	15.6	47.2	2.5
1965	64.5	10.9	5.7	50.1	2.2	16.6	50.1	2.2
1966	69.0	11.8	6.5	52.9	2.2	18.3	52.9	2.2
1967	73.9	12.8	7.1	56.1	2.1	19.9	56.1	2.1
% of GNP								
1962	100	14.6	9.5	79.9	4.0	24.1	79.9	4.0
1963	100	16.0	9.6	78.5	4.1	25.5	78.5	4.1
1964	100	16.7	9.1	78.3	4.1	25.8	78.3	4.1
1965	100	16.9	8.8	77.7	3.4	25.7	77.7	3.4
1966	100	17.1	9.4	76.7	3.2	26.5	76.7	3.2
1967	100	17.3	9.6	75.9	2.8	26.9	75.9	2.8
Average Rate of Increase (1963 - 1967)								
	7.0	10.8	7.3	5.9		9.4	5.9	

TABLE 52 — 1963 - 1967 Public Expenditure Targets

(Billion TL. at 1961 prices)

	CURRENT EXPENDITURES						
	GENERAL AND ANNEXED BUDGETS						
Years	Development	Domestic Debt Repayment and interest on internal and external debts	Other	Local Administration	Total	Investment Expenditure	Total Public Expenditure
1962	2.06	0.82	4.13	0.95	7.96	5.08	13.04
1963	2.60	0.88	4.62	0.97	9.07	5.80	14.87
1964	2.62	0.75	4.93	1.05	9.35	6.60	15.95
1965	2.88	0.86	5.12	1.15	10.01	7.10	17.11
1966	3.49	0.90	5.36	1.25	11.00	7.80	18.80
1967	4.10	0.80	5.60	1.40	11.90	8.40	20.30
			% of GNP				
1962	3.91	1.56	7.83	1.80	15.10	9.64	24.74
1963	4.61	1.56	8.19	1.72	16.08	10.28	26.36
1964	4.34	1.24	8.18	1.74	15.50	10.94	26.45
1965	4.47	1.33	7.94	1.78	15.52	11.01	26.53
1966	5.06	1.30	7.77	1.81	15.94	11.30	27.25
1967	5.55	1.08	7.58	1.89	16.10	11.37	27.47
			INDEX				
	100	100	100	100	100	100	100
	126	107	112	102	112	114	114
	127	91	119	111	117	130	122
	140	105	124	121	126	140	131
	169	110	130	132	138	154	144
	199	98	136	147	149	165	156
			Average Rate of Increase (1963 - 1967)				
	15.1		6.3	8.1	8.4	10.6	9.3

TABLE 53 — 1963 - 1967 Public Revenue Targets (Billion TL. at 1961 prices)

Years	Tax Revenue	Other Public Revenues	Savings Bonds	Surplus Funds of State Economic Enterprises	Local Administration Revenue	Counterpart Funds	Funds from Unidentified Sources	Total Revenue
1962	7.70	0.93	0.50	0.55	1.34	2.02	—	13.04
1963	9.00	0.98	0.53	0.67	1.44	1.41	0.84	14.87
1964	10.10	1.03	0.57	0.96	1.54	1.57	0.18	15.95
1965	10.92	1.08	0.61	1.01	1.65	1.39	0.45	17.11
1966	11.80	1.13	0.65	1.08	1.76	1.49	0.89	18.80
1967	12.80	1.19	0.70	1.23	1.88	1.39	1.11	20.30
				% of GNP				
1962	14.61	1.76	0.95	1.04	2.55	3.83	—	24.74
1963	15.95	1.74	0.95	1.19	2.55	2.50	1.48	26.36
1964	16.74	1.71	0.95	1.59	2.55	2.60	0.30	26.45
1965	16.93	1.67	0.95	1.57	2.55	2.16	0.70	26.53
1966	17.10	1.64	0.95	1.56	2.55	2.16	1.29	27.25
1967	17.32	1.61	0.95	1.66	2.55	1.88	1.50	27.47
				INDEX				
	100	100	100	100	100	100	—	100
	117	105	106	122	107	69	100	100
	131	111	114	175	115	77	21	122
	142	116	122	184	123	69	54	131
	153	122	130	196	131	74	106	144
	166	128	140	244	140	69	132	156
				Average Rate of Increase (1963 - 1967)				
	10.8	5.0	7.0	18.2	7.0	—	—	9.3

PUCLIC REVENUE TAGETS

The public revenue targets shown in Table 53 are explained in greater detail below.

TAX REVENUE

In the 1950-1960 period, the taxes included in the general budget averaged 11 - 12 per cent of GNP. This percentage is expected to rise to 14.6 in the 1962 budget.

In order to meet the financing requirements of the plan it is necessary that tax revenue should rise to 17.3 per cent of GNP by the end of the plan period. This increase in tax revenue will be ensured by economic growth and the reforms to be made in the tax system.

Tax revenue estimates are based on the financing requirements of the five - year plan. Taking into account the fact that 1962 tax revenue estimates may not be fully realized the difference between 1962 tax receipts and the receipts shown for 1963 in Table 53 will be compensated partly by the normal yearly increase of tax receipts due to economic development and partly by the additional revenue to be supplied by reforms in the tax system.

OTHER PUBLIC REVENUES

Other public revenues, include the fees collected by agecies included in the annexed budget and the revenue on State property which is not in the nature of taxes. Since no relation can be established between the increase of this type of revenue and the increase of national income, estimates were based on the assumption that the average rate of increase of 5 per cent which this revenue has shown in the past would continue. These estimates take to account of revisions in the legislation relating to annexed budget agencies likely to be made during the plan period. With certain changes, such as increasing the fees charged in return for their services by certain annexed budget organizations and in particular by the universities important revenue increases may be obtained. The additional income to be obtained from changes of this kind have not been taken into account under this item. However in order to meet the deficit under "Funds from unidentified sources", the revenues of these agencies may have to be increased.

SAVINGS BONDS

Since savings bonds were first issued in 1961, it was not possible to estimate revenue from this source on the basis of past trends. A 7 per cent increase per annum, similar to the rate of growth, has been assumed.

FUNDS TO BE GENERATED BY STATE ECONOMIC ENTERPRISES

In estimating the funds to be generated by State Economic Enterprises during the plan period the effect in the forthcoming years of investments initiated prior to 1963 has been taken into consideration. On the other hand, the higher productivity of these enterprises resulting from reorganization measures, the changes in price policy, and the additional funds to be generated by investments begun and completed within the plan period have not been taken into account. For this reason, it is highly probable that the funds of State Economic Enterprises in the plan period will exceed estimates. It is thought that the additional funds collected will cover part of the deficit appearing under "funds from unidentified sources".

LOCAL ADMINISTRATION REVENUE

It is assumed that the share of annual revenue from local administrations in GNP during the plan period will be the same as the average share in the period 1950-1960. Accordingly, revenue estimates were based on an annual rate of increase of 2.5 per cent.

COUNTERPART FUNDS

The revenue from counterpart funds has been estimated according to the current account deficit but such capital movements as private foreign capital investments, which do not create counterpart funds, have not been taken into consideration.

Counterpart funds from various types of U. S. aid that are alocated to the Turkish government under the agreements concluded with the U. S. goverment have been taken into account. It is estimated that 10 per cent on average of total counterpart funds will be assigned to the private sector.

FUNDS FROM UNIDENTIFIED SOURCES

The amounts stated under this column will be supplied from the new funds to be generated by State Economic Enterprises as a result of reorganization and the price policy to be adopted, from the higher fees to be charged by agencies included in annexed budgets or from the issue of domestic loans.

SECTION V

GENERAL SURVEY OF SECTOR DEVELOPMENT

BASIC PRINCIPLES

In the preparation of sector programs, development prospects in various sectors were examined with a view to realizing the following targets within a framework of balanced growth :

(a) To use natural resources, invested capital and manpower in the most economic way so that factors of production may be both increased and combined in the most efficacious manner.

(b) To lay the foundations for sustained development. If the development of any sector were based only on notions of short - term profiability, bottlenecks would soon be created and require costly interventions. Sustained development implies that the production of basic goods and services should be geared to meet long - term demand. Due importance has therefore been attached to basic infrastructure investments (e.g. transport, energy, education, etc.).

The availability of basic goods and services does not in itself cause or stimulate expansion. The channelling of investments to the output of those goods and services for which demand is likely to increase with rising incomes will make it possible, with certain sacrifices, to maintain the rate of growth at a high level and to meet requirements fully as they develop. These considerations have been applied to both internal and external demand.

(c) To prevent imbalances and bottlenecks in inter-sector relationships. Thus, consideration has been given to keeping the output of raw material producing sectors in line with the requirements of those consuming sectors that are expected to develop rapidly. For example the equipment and machinery requirements resulting from the expansion of various sectors have been calculated and plans made to coordinate equipment and machine production with sector demand.

(d) To promote the development of sectors producing export goods and those producing import replacing goods. In view of the foreign exchange difficulties likely to occur during the plan period importance was attached both to expanding exports and to promoting import substitution.

The methods used in the selection of lines of development that are likely to prove most fruitful are stated below.

METHODS

Production targets and the size of investments in the different sectors were computed by comparing the results obtained from three separate studies made on the basis of a 7 per cent annual average increase in GNP.

An input-output table for fifteen sectors was prepared and sector projections were made in accordance with the results of this table. On the other hand, sectors and subsectors were analyzed individually and developments and changes in each of these were estimated. Finally project studies were made in order to analyze the direct and indircet effects of projects and pre-projects coming from the public and private sectors.

(a) Input - Output Studies

In order to determine production targets by sector a fifteen sector input-output table was constructed. The data in this table is based on the invertory studies of specialized sector committees and on the publication of the Central Statistical Office.

The matrix showing the interrelationships between the fifteen sectors was solved with respect to the values that total final demand will attain during the plan period.

Total final demand was divided into seven groups and for each group appropriate means of analysis were used. These groups comprise private consumption, public consumption, exports, competitive imports, private investments, public investments and changes in stocks. Private consumption - the most important component of final demand was estimated on the basis of the income elasticity of consumer demand in the last ten years. Public consumption was taken as the demand on sectors arising from general and annexed budget expenditures. Export estimates were based on studies of the prospects of specific commodities with regard to production and sales on external markets.

(b) Sector Studies

These studies concern essentially the investments to be made in the coming five years, the production targets in different sectors, the inter-sector relationship, export and import values, and the evaluation of import replacement. They contain demand forecasts made in a fifteen-year perspective and estimates as to the value added and investment requirements.

Sector committees were set up to carry out this work and collect basic data for the plan. These committees first made an invertory of their sectors. They then investigated the possibilities of utilizing, without resorting to large scale investments, the capacity lying idle as a result of technical, administrative, legal or economic barriers; and finally they pointed out briefly the prospects for development in their respective sectors. Extensive use was made of this work in setting sectoral production targets.

A short account of the methods used in different sectors is given in the following section. The general methods applied are outlined here.

The studies are based on 1967 and 1977 targets and give annual figures for the period 1963 - 1967.

(1) Demand Projections

Demand projections based on present tendencies were made for different variables and an area limited by maximum and minimum demand was thus defined. This demand was determined on a per capita basis. Income elasticity of demand was calculated for those goods with a time series and compared to income elesticities in countries with similar per capita income levels. The extent to which restrictions and bottlenecks affecting demand or supply could be mitigated was examined. In the case of inter-industry demand, adjustments were made on the basis of the estimated development of the sectors in which the demand would arise. Inter-sector relationships were taken into account in order to prevent the emergence of bottlenecks in the supply of basic goods during the development period.

In addition to establishing a balance within each sector, measures necessary to maintain equilibrium in the supply of and demand for basic goods of each sector during the five-year plan period are shown. In the event of deficiencies in supply due to production time-lags, imports to balance supply and demand are shown in the foreign trade program.

Goods which represent an insignificant amount of the value produced by given sectors have been examined jointly and an aggregate equilibrium has been sought. Equilibrium for ecah commodity in this group will be maintained by the price mechanism of the market.

In addition to the studies on domestic final demand and inter-industry demand, two separate working groups have examined export prospects. The group on sector studies examined primarily the production prospects of exportable goods, while the export groups concentrated on studies relating to the elasticity of foreign demand and marketing possibilities. The conclusions of these two studies were brought together and the exports of the various sectors determined accordingly.

(2) Production Targets

In determining production targets the main consideration was to meet final, inter-industry and foreign demand.

In this connection, the production capacity of sectors was analyzed, idle capacity was determined and the extent to which demand could be met by a more efficient use of this capacity was assessed. After calculating the additional capacity to be established in order to meet the demand which existing capacity is not able to satisfy, the optimum capacity of production units was found and broken down by years in order to make it consistent with demand.

(3) Inputs Related to Production

The varieties, quantities and values of inputs at the production level of plants were determined and adjustments and estimates were made to take into account future technological changes in the various branches of industrial activity.

Input requirements, imports included computed for the activities in each sector are contained in the outputs of the relevant sectors. Thus all sectors have been planned to develop in a harmonious fashion without creating congestion or bottlenecks.

(4) Effect on Foreign Trade

The imports of investment goods and of needed raw and auxiliary materials for the operations of each sector and the exports to be generated by the sectors were computed. As the achivement of balance in foreign trade was taken as one of the targets in the sector sudies, consideration was given ,in the light of comparative cost evaluations made especially for industry to the establishment of import replacing undertakings.

(5) Value Added

The yearly value added was calculated ,taking into account only the direct effects of the activities in each sector.

(6) Investments

The new production units to be set up were planned so as to reach the yearly production levels set as targets. The investments for these facilities were spreadover the plan years with due regard for the physical characteristis and construction periods of these facilities.

Sector studies were made in the light of actual conditions prevailing in the country; technical shortcomings, bottlenecks and foreseeable developments were taken into account in the theoretical analyses made, thus making it possible to avoid obstructions in the implementation of the plan.

In view of the fact that some inputs, due to their nature, cannot be imported (energy, communications etc.) planning with regard to these inputs was designed to permit the growth of the other sectors of the economy on the lines envisaged.

(c) Project Analyses

In determining the units to be added to production, and in spreading the investments over time, specific projects were, to a large extent ,taken into account. Project proposals were collected from State organizations and evaluated separately in relation to sectors.

There are several reasons for basing studies on projects, namely :

(1) Information about needs and possibilities can be collected directly from the authorities concerned;

(2) The practical diffuculties which prevent following a predetermined order in dealing with new production units (whether the project for the plant is ready or not etc.) will be ascertained;

(3) It will be possible to have a more thorough knowledge of the units to be set up, to ascertain the related production and investments that will be required and thus prevent the creation of bottlenecks;

(4) It will be possible to determine the distribution of investments within the country;

(5) The practice of preparing projects, which is still not widely established in the country, will be encouraged;

(6) By means of project studies it will be possible to ensure the cooperation of the private sector and the implementing agencies in the preparation of the plan.

Investments contemplated by the private sector have been surveyed and appraised by a special group which has been in contact with entrepreneurs in the fifteen most important provinces.

After careful analysis ,the draft projects collected from the public sector and private enterprise were classified according to their order of priority within their respective sectors.

The various criteria used in determining the priority of projects serve to assess the contribution to be made by individual projects to the economy in relation to the limited resources to be devoted to their realization.

According to their nature projects were divided into two groups. For projects of an economic nature the criteria described above were used. For projects of a social nature, comparative needs and regional development possibilities and needs were taken as criteria.

As the objectives defined must be attained with a minimum expenditure of resources it follows that projects should be examined according to certain criteria and only the best among them selected.

Moreover ,as some rescurces such as capital and foreign exchange, are more limited than others their allocation to projects had to be based on a system of priorities. In determining the priority of projects, consideration was given to the value added by the project to the national income, its profitability its effect on the balance of payments, the foreign exchange earnings obtained from investments made in foreign currency and the comparative cost and employment effect. The regional distribution of projects was taken as an additional criterion.

CONCLUSIONS

The studies made on the basis of the methods outined above have shown that ,in order to achieve an average rate of growth of 7 per cent per annum in the gross national product and the balanced growth of sectors, total public and private investments in the five-year period should amount to 59.65 million TL.

The distribution of total investments by main sectors is shown in Table 49.

TABLE 49/1 — Gross Investments, 1963 - 1967

Sectors	Million TL. At 1961 prices	As percentage of total gross investment
Agriculture	10 584.0	17.7
Mining and quarrying	3 233.0	5.4
Manufacturing	10 089.2	16.9
Energy	5 134.0	8.6
Transport and communication	8 159.4	13.7
Services	3 965.9	6.6
Housing	12 116.0	20.3
Education	4 227.0	7.1
Health	1 346.9	2.3
Tourism	827.0	1.4
TOTAL	**59 646.8**	**100.0**

Up to now agriculture developed mainly through the extension of the area under cultivation and did not benefit from large investments. In the plan importance is given to investments leading to intensive farming. The fact that agriculture has been neglected in the past, that disguised unemployment prevails in this sector, and that agricultural production must show a surplus if industrialisation is to be succesful explains why agricultural investments have been put at a high level.

Investments of over 3 billion TL. have been allocated to mining in order to bring production in this sector to a level where it can meet both domestic and foreign demand.

Important changes will take place in many branches of manufacturing industry. The investment which will permit previously established branches of industry to develop in line with the growth of national income have been determined. While the total of these investments is not great, large scale investments in new branches of industry have been planned.

Investments are planned in certain sectors despite the existence of idle capacity. These investments will ensure that capacity is better utilized and that production costs are reduced in these sectors, thereby opening up export possibilities.

Stress has been laid on investments in energy, transport and communications so that economic growth may proceed without interruptions. Since the output of these sectors cannot be imported, the aim is to attain a sufficient level of production to satisfy needs with respect to both time and place.

20.3 per cent of total investments have been devoted to housing and it is expected that a large part of this investments will be undertaken by the private sector. This percentage was determined on the assumption that certain measures envisaged will have the effect of curbing the rate of increase in total investment in housing. Measures that will make it possible to divert investment from luxury to low cost housing and to construct a greater number of dwelling units with the same expenditure are set out in the program for the housing sector.

In order to raise the general level of education and at same time to supply the skilled labor necessary for development, great importance has been attached to education. Out of a total of 59.6 billion TL., 4.227 billion TL. will be invested in this sector.

Investments in the public health sector constitute 22 per cent of total investment, a marked increase over the level of investment in the past. Health programs were prepared with a view to ensuring a more efficient use of services. Shortage of personnel obstructs the wider application of this program. With the elimination of this shortage, there will be an increase [illegible] health investments in future plan periods.

Tourism investments amount to 827 million TL., or 1.4 per cent of total investments.

TABLE 50/1 — Gross Investments, 1963-1967 **(Million TL at 1961 prices)**

	1963	1964	1965	1968	1977	Total
Agriculture	1213.2	1712.2	2182.0	2590.0	2851.0	10548.4
Mining and quarrying	457.8	735.2	794.6	809.9	435.5	3233.0
Manufacturing	2166.3	2359.9	2276.9	1726.4	1559.7	10089.2
Energy	706.4	850.0	1057.9	1233.5	1286.2	5134.0
Transport and communication	1298.0	1355.9	1482.3	1851.9	2171.3	8159.4
Services	581.0	426.1	637.0	1030.0	1291.8	3965.9
Housing	2085.0	2229.0	2390.0	2594.0	2818.0	12116.0
Education	660.0	783.0	795.0	836.0	1153.0	4227.0
Health	200.5	230.1	278.2	320.2	317.9	1346.9
Tourism	145.5	148.2	164.7	175.6	193.0	827.0
TOTAL	**9513.7**	**10829.6**	**12058.6**	**13167.5**	**14077.4**	**59646.8**

TABLE 51/1 — Sector Investment in Relation to Total Annual Investments
(as percentages)

	1963	1964	1965	1966	1967	Total
Agriculture	12.8	15.8	18.1	19.7	20.2	17.7
Mining and quarrying	4.8	6.8	6.6	6.1	3.1	5.4
Manufacturing	22.8	21.8	18.9	13.1	11.1	16.9
Energy	7.4	7.9	8.8	9.4	9.1	8.6
Transport and communications	13.7	12.5	12.3	14.1	15.4	13.7
Services	6.1	3.9	5.3	7.9	9.2	6.6
Housing	21.9	20.6	19.8	19.7	20.0	20.3
Education	6.9	7.2	6.6	6.4	8.2	7.1
Health	2.1	2.1	2.3	2.4	2.3	2.3
Tourism	1.5	1.4	1.3	1.3	1.4	1.4
	100.0	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Tables 50 and 51 show the yearly distribution of gross investment by sectors.

Investments in agriculture constitute 17.7 per cent of total investments in the five-year period. The percentage is below this average in the first two years and above it in the last three years. As agricultural organizations are unable to increase their investment capacity at once, investments in the agricultural sector were planned so as to increase gradually.

The importance given to the agricultural sector reflects the firm decision to prevent inflation during this period. Accordingly, production targets in the agricultural sector were determined with due regard to the changes which development should bring about in the food and agricultural products processing industries.

Demand estimates based on income elasticities were used in calculating production targets. In estimating demand, account was taken of population increases ,the additional increase in food demand caused by urbanization, the raw material demands of new industries and the effective demand for Turkish exports on foreign markets.

A further reason for the importance attached to the agricultural sector is that the exports of suplus agricultural production will make it possible to import the investment goods and raw materials required for industrialization.

As the extesion of cultivable areas has already reached its limit, the increase of agricultural production in the forthcoming period must be brought about by more intensive farming. Irrigation investments and programs for promoting the use of fertilizers have therefore been planned.

As a result of all these investments an annual increase of 4.2 per cent in farm production is expected. This gives a capital-output ratio slightly over 2. It will seem at first glance that very little is to be invested in agriculture in relation to output. It must be remembered, however, that investments in agricultural training are included in education investments, and that irrigation investments are partly included in the investments of the energy sector.

Moreover, it must be realized that the value added to agricultural investments by the peasents' own efforts (construcion of field irrigation systems, barns, warehouses etc.) has not been included in the investments shown above.

Despite the development planned for agriculture, the share of this sector in the gross national product will fall gradually (as shown in Table 53) with the rapid expansion foreseen in the other sectors, particularly in industry.

A large part of agricultural investments will be undertaken by the State. It is expected that public investments will induce a gradual rise in private investments.

The investments allocated to the manufacturing industries amount to 10,089.2 million TL. and average 16.9 per cent of total investments.

A large part of the investment in manufacturing industry is concentrated in the first three years of the plan. This is due to the fact that, notwithstanding the gradual increase in total investments during the plan period, investments in the Ereğli Iron and Steel Works are scheduled for the first three years of the plan.

Subject to technical shortcomings, it is intented to complete as early as possible investments intiated before the plan period. The completion of these investments will contribute in 1963 and 1964, together with those of the Ereğli Iron and Steel Works, to raising the level of investment in manufacturing industry in the first years of the plan.

The distribution of investments (shown in Table 51) was determined in relation to production targets.

(a) Production Targets

In the sector programs, production targets are given for individual commodities. Production targets for the main sectors only are shown in these pages. In the first five-year plan period, target increases in production are : 25.6 per cent in agriculture 52.8 per cent in mining and quarrying, 72.8 per cent in manufacturing industry, 83.3 per cent in energy and 58.1 per cent in transport and communications. The total increase in the production of these five main sectors is 43.7 per cent during the five-year period, with an annual rate of growth of 7.5 per cent. Within sectors, this rate is 4.7 per cent for agriculture, 8.7 per cent for mining and quarrying, 11.5 per cent for manufacturing industry, 12.8 per cent for energy, and 9.6 per cent for transport and communications. These rates will provide for a balanced growth in the basic sectors and lay a sound foundation for future plan periods.

TABLE 52/1 — Production Targets **(Million TL. at 1961 prices)**

Sectors	**1962**	**1963**	**1967**	**1967 Index 1962=100**	**Annual rate of Growth**
Agriculture	34690.0	36470.0	43560.0	125.6	4.7
Mining and quarrying	2341.4	2583.9	3577.4	152.8	8.7
Manufacturing	18203.5	20867.1	31462.1	172.8	11.5
Energy	648.0	729.1	1187.7	183.3	12.8
Transport and communications	3378.2	3744.9	5340.2	158.1	9.6
T O T A L	**59261.1**	**64395.0**	**85127.4**	**143.7**	**7.5**

(b) Value Added

The value added to the national income by the five main sectors is shown in Table 53. The value added during the five-year period will increase by 22.7 per cent in agriculture, 56 per cent in mining, 83.2 per cent in manufacturing, 85.1 per cent in energy and 64.7 per cent in trasport. The five sectors together will increase by 39.7 per cent or at the annual rate of growth of 6.9 per cent. Within sectors, the yearly rate growth is 4.2 per cent for agriculture, 9.3 per cent for mining, 12.9 per cent for manufacturing, 13.0 per cent for energy and 10.5 per cent for transport.

At the end of the first five-year plan, the structure of the economy will show important changes. The share of agriculture in the gross national product will fall from 43.8 per cent in 1962 to 38.3 per cent in 1967. Though great importance is attached to agriculture, the decrease of its share in GNP is linked to the higher rates of expansion in the other sectors. While agriculture's share in GNP will diminish, the share of industry (manufacturing, mining and energy) will show a notable increase, rising from 16.8 per cent of GNP in 1962 to 21.4 per cent at the end of the first five-year plan. Taken separately, these increases are: for mining, form 3.2 of GNP to 3.6 per cent, for manufacturing, from 12.8 to 16.7 per cent ,and for energy from 0.8 to 1.1 per cent. It is expected that services will increase yearly by 7.2 per cent.

TABLE 53/1 — Value Added **(Million TL. at 1961 prices)**

Sectors	1962	1963	1967	1967 Index 1967=100	Annual rate of Growth
Agriculture	23100.0	24030.0	28450.0	123.2	4.2
Mining and quarrying	1711.6	1894.3	2669.2	156.0	9.3
Manufacturing	6748.1	7671.3	12398.0	183.2	12.9
Energy	434.0	490.5	803.5	185.1	13.0
Transport and communications	2047.3	2318.1	3370.7	164.7	10.5
TOTAL	**34020.6**	**36565.5**	**47513.4**	**139.7**	**6.9**

Percentage Share of Sectors in Gross National Product

Agriculture	43.8	43.0	38.3
Mining and quarrying	3.2	3.3	3.6
Manufacturing	12.8	13.5	16.7
Energy	0.8	0.9	1.1
Transport and communications	3.9	4.1	4.6

(c) Capital-Output Ratio

To attribute the expected increase in production between 1963 and 1967 solely to investments made in this period would be to disregard the importance of the general approach and economic policy followed. With better techniques, better organization, better management and the more efficient utilization of productive capacity, significant increases in output can be realized. The realization of this increase depends on prompt reorganization to assure the better utilization of existing capacity and new investments. In calculating the increase in output shown in Table 53, account was taken of the probable effect of these organizational measures.

Similarly, in the selection of projects and the coordination of various projects and programs, measures to maximize the output due to investments have been applied.

The value added in the five main sectors, compared to the investments made in these sectors, gives a capital-output ratio of 2.7.

This rather low capital-output ratio is caused by the use of excess capacity created in the pre-plan period. It is also assumed that the above-mentioned reorganization measures will be taken. In the second five-year plan period, the capital-output ratio is expected to rise.

The capital-output ratio has been used in both an active and in a passive form in the plan. To determine the five-year investment requirements the capital-output ratio of the last ten years was applied to the increase in gross national product. The sectoral distribution of investments was made on the basis of projects, programs and sector reports; the capital-output ratio in this case is the result of weighing investments against the expected increase in output in the various sectors. The difference between the capital-output ratio, calculated according to the data of the last ten years and that calculated according to the five-year plan estimates is so slight as to be negligible.

SECTION VI

AGRICULTURE

BASIC PRINCIPLES, METHODS and TARGETS

a. Objectives of Agricultural Policy

The plan for agriculture gives due importance to the place occupied by this sector in the general economy. In conformity with the general objectives of the plan, the following objectives have been laid down for agriculture :

(1) To maintain a 7 per cent rate of growth in gross national product without resorting to inflation; at the same time, to raise agricultural production with a view to expanding exports and meeting the growing industrial needs for raw materials, thus fostering industrialization;

(2) To improve nutritional levels, by increasing the intake of protein and in particular of animal protein foods;

(3) To further the social aims of the plan by : promoting the increase of consumption with the object of reducing income disparities; contributing to reduced unemployment; hindering unplanned urbanization due to the excess flow of workers from villages to cities over and beyond the employment-creating capacity of non-agricultural sectors; and, in general, by encouraging agricultural and community development.

(4) To achieve the long-term objectives of the plan by promoting the balanced utilization of land in the long-run, and in this way help to conserve resources as well as ensure their most efficient use.

b. Impact of the General Policy of Development on the Agricultural Sector

Agricultural policy was defined within the context of the general development policy, as the two are closely interrelated.

(1) State orientation for the economy and State assistance and guidance to farmers to promote certain farm activities is clearly of importance. The participation of the State in various agricultural activities is likewise envisaged.

(2) The financial policy followed may affect the realization of the investment program in the following ways :

(a) A deflationary financial policy may retard the development of the agricultural sector as it tend to :

(i) Restric agricultural investments and, in general, the longterm investments to which importance is attached in the plan, and thus hamper the solution of the critical problem of population pressure.

(ii) Restrict the present or future supply of private capital, scant though it may be, in the agricultural sector.

(iii) Restrict demand - a financial policy of this kind may hinder the intensification of agriculture which it is intended to further in this plan.

.b) The effects of acute inflation would be as follows :

(i) The recources to be devoted to agricultural investments would be diverted to speculative ends.

(ii) Long-term price relationships which are of major importance would be distorted.

(iii) The distribution of agricultural investments would not be that best suited to promote the different aims pursued.

(iv) There would be an imbalance between that part of the production which is marketed and that which is consumed on the farm.

(3) Encouragement will be given to investments which are conducive to the attainment of plan objectives. The measures designed to prevent the flow of investments to inappropriate fields are mentioned in the relevant sections of the agricultural program.

(4) A policy aimed at eliminating excessive income disparities will be followed. This policy concerns land reform and the price relationships of agricultural and non-agricultural commodities. The expected improvement of agricultural productivity and the subsidies considered for inputs in case of necessity will assure a development favorable to the farmer in the relationship between prices he pays and those he receives. Such structural reforms as the agrarian reform, together with the setting-up of cooperatives and the introduction of equitable taxes in agriculture, will help to achieve a more equitable income distribution.

(5) The main instruments of financial policy are subsidies and taxes.

(a) The general principle followed with the object of raising productivity is to to subsidize inputs, when necessary, rather than the final products.

(b) In the levy of taxes :

(i) The economic and social conditions prevailing in the sector will be taken into account.

(ii) Care will be taken to see that these taxes do not have an adverse effect on productivity.

(6) The general policy of education and training, as regards agriculture, consists of :

(a) Preparing curricula related directly to the specific problems in the agricultural sector.

(b) Attaching importance to agricultural education and extension as well as to training in agricultural trades and handicrafts.

(c) Organizing the training of skilled workers and of technical personnel at every level.

(d) Providing courses on non-agricultural subjects for those who wish to leave agriculture.

(7) The policy followed with regard to manpower, employment, and wages is based on the following considerations :

(a) It is important to prevent inflation during the period of development, so the utilization of manpower must be planned carefully. With regard to its positive effects, employment on a larger scale by increasing the productivity of future generations, would constitute an additional investment. On the other hand, the mobilization of labor at current wage levels may hinder all efforts made for development. Therefore the principle of benefitting from voluntary labor, or labor which is paid partly in kind, has been accepted.

(b) The unused labor supply was taken into consideration in determining priorities for agricultural projects.

(c) The execution of public works designed to utilize the seasonally available rural labor force will be considered.

(8) Policy on public works and their reorganization :

The programming and organization of public works does not consist merely of correct timing, but is determined in relation to the following considerations :

(a) Public works programs create employment which, by relieving the pressure of population in the agricultural sector, will help to raise agricultural productivity.

(b) In regions where large estates predominate, public works help to improve the bargaining position of agricultural workers, sharecroppers, and tenant farmers vis-a-vis the landowners. This is of significance in achieving a more equitable income distribution and in the strategy of land reform.

(c) Principles of Agricultural Development

In view of the scarcity of resources, the general objectives described above can oly atatined if the following basic principles are adopted :

(1) The measures to be taken and the work to be carried out must be complementary.

This is important in order to derive maximum benefit from investments. Thus, instead of initiating partial plans for isolated products, it is intended to use inputs in a complementary way.

On the other hand, in selecting projects for the program, importance has been attached to the complementarity of these projects within the same sector as well as with those of other sectors.

(2) Tha targets set and methods applied must be determined in accordance with the general objectives of the plan :

In view of present resources, and organizational and financial limitations existing in agriculture, a higher rate of growth than that aimed at does not seem to be attainable.

(3) A policy must be followed and measures applied to ensure that the activities of social and other organizations progress in step with agriculture.

The success of a plan for agricultural development depends largely on long-term action to be taken to encourage the expansion of farm out-put, to set up storage, marketing and credit facilities and to promote community development.

PRODUCTION TARGETS

a. Distribution of Production

Table 54 shows the change in the composition of agricultural production. The changes which have occurred in the relative importance of different products in total agricultural production are marginal. A radical change in the structure of agriculture, moreveover, cannot be expected to take place within the fairly short period of five years. The factors slowing down such a conversion include old-established production and consumption patterns, the rapid growth of population and the resulting high demand for basic foodstuffs, organization deficiencies and the short construction period for key investments. With the limited supply of arable lands now available, development in the coming years can be achieved only by the rational use of the limited investible resources and by higher productivity. Due to this, the rate of agricultural growth in the five-year plan period is estimated to be only somewhat higher than that in recent years. However, it should be remembered that this is a period of preparation in which the foundation will be laid for sustained development in the future.

TABLE 54 — Composition of Agricultural Production (Percentage share in value of major groups of products within gross total production and production indices)

Groups of Products	1962	1967	Production Index (1962=100)
Cereals	23.1	21.3	115
Pulses	2.0	2.8	175
Animal feed	15.1	13.7	114
Fruit and vegetables	19.7	19.5	125
Industrial crops	10.6	11.6	132
Livestock products	26.5	27.7	131
Forestry products	2.4	2.6	138
Fishery porducts	0.6	1.3	280
TOTAL	**100.0**	**100.0**	**125,6**

As seen from Table 54 a more intensive farming system will be gradually introduced in the plan period as a consequence of better land utilization and a more balanced pattern of production.

b. Situation of Demand and Supply for the Main Products

This section deals with the supply and demand equilibrium of the main products. This equilibrium was determined by means of general methods. In the case of commodities whose production covers most of the internal needs, the income elasticity of demand has been calculated in the light of the growing population pressure and the increase of per capita consumption spendings. Exports possibilities were deduced by substracting internal needs from the production estimates. In these estimates past exports figures were also taken into account. For some other products (fresh fruit, vegetables, tobacco, etc.) the estimated volume of exports was calculated in relation to the level of external demand.

In production estimates, account was taken, on the one hand, of growth-retarding factors such as organization deficiencies, long-established farming practices, ecological conditions and marketing difficulties, and on the other hand of action to be taken to expand output in connection with investments (primarily in irrigation), the use of fertilizers and improved seeds, plant protection and animal disease control and advisory services. At the same time, in order to achieve balanced production intermediary demand between the different secondary sectors has been taken into account.

(1) Per Capita Food Consumption

The per capita food consumption figures for various agricultural products were calculated according to the method used in international food balance tables.

It is estimated, as shown in Table 55, that in the case of wheat and rice consumption will rise by the end of the five-year period ,that it will decline for other cereals, and that there will be varying increases in the consumption of other foodstuffs, the largest being in fish.

The following changes will be made in diet composition as a result of this plan. Protein and calory intake will increase by 2 per cent, but the percentage of calory intake from cereals will drop from 71.5 per cent of the total in 1962 to 68 per cent in 1967. In the same way, the respective shares of animal and vegetable protains in the total protein intake will change from 17.1 per cent and 82.9 per cent in 1962 to 19.7 per cent and 80.3 per cent in 1967.

According to these consumption figures, the daily calory intake at the beginning and in the course of the plan period appears to be some-what above 3.000 calories, of which about 70 per cent is due to cereals. It should be remembered that these rather high calory intake figures are the result of errors persisting in agricultural statistics. From this point of view, greater signifince should be attached to relative changes in these figures.

TABLE 55 — Per Capita Food Consumption (Kg.)

Food Items	1962	1963	1967	1967 Index (1962=100)
Wheat	195.0	196.0	205.0	105.1
Rice	3.5	3.5	5.0	142.8
Maize	30.0	30.0	22.0	73.3
Other cereals	38.0	36.0	25.0	65.8
Vegetables	77.2	79.2	90.6	117.3
Apples	7.2	7.3	8.0	111.1
Oranges	7.3	7.5	8.5	116.4
Grapes	77.8	78.3	79.7	102.4
Other fruit (including shell fruit) ...	24.9	25.2	26.5	106.4
Sugar	10.7	11.4	14.5	135.5
Potatoes	38.0	39.0	43.0	113.2
Pulses	10.6	10.7	11.3	106.6
Vegetable oils........	7.3	7.5	8.7	119.2
Meat	14.7	15.2	17.7	120.4
Fish	2.0	2.2	5.3	265.0
Milk	103.0	106.0	114.0	110.7
Eggs	2.2	2.3	2.7	122.7

(2) Production Targets

Targets are given for the main agricultural products and particilarly those which are of interest to large numbers of producers, those which are major export products and are expected to be exported in larger quantities, and those for which domestic demand is expected to develop. The production and consumption equilibrium for the most important of these products is shown in Table 56. The products selected account for more than than 70 per cent in value of total gross production in agriculture.

(a) Wheat

The estimation of per capita wheat consumption presented some difficulties. According to the different sources available, per capita wheat consumption in Turkey today varies between 190 kg. and 214 kg. per annum. Taking into account the population's nutritional habits and income level and the corresponding figures for countries with similar income levels, it was calculated that individual wheat consumption at present was of 195 kg. per annum and would reach 205 kg. by the end of the plan period. On this estimate, wheat is seen to have an income elasticity of 0.2.

As against this slight increase in wheat consumption, the consumption of other cereals, particularly maize, will decrease. Thus total per capita cereal consumption will diminish from 266.5 kg. per annum at present to 257 kg. in 1967. Other protein foods, however, will show an increase. Thus, a slight improvement will take place in nutritional standards.

The policy proposed in the plan is to allocate a minimum amount of irrigated land to wheat production. The aim is to replace wheat either by crops which bring higher returns or by crops which cannot be cultivated economically under dry farming conditions in semi-arid regions, but which should be grown in rotation as part of the conversion to an intensive system of farming.

By 1967, improved seeds ad chemical fertilizers will be used in combination on 20 per cent of the total area devoted to wheat, amounting to 1.5 million hectares. At present, the use of fertilizers is very restricted. In addition, improved seeds will be used on 55 per cent, as against only 25 per cent today, of the total area sown to wheat. At the same time the services for plant protection will be enlarged by 60 per cent in comparison to present standards.

Taking into account the increase in population and in per capita consumption, it is estimated that, conditions being normal, 500,000 metric tons will be added to Turkey's wheat stocks at the end of the plan period. If wheather conditions are exceptionaly favorable, the higher production surpluses will be stocked, while in unfavorable wheather conditions, production and stock deficits will have to be met by imports.

(b) Barley

The increase expected in barley production is about 12 per cent. On the other hand, individual consumption will drop from 12 to 7 kg. per annum. A large part of the resulting surplus will be used for animal feed. The share of total barley production devoted to human consumption will decrease from 17 per cent in 1963 to 7 per cent in 1967. By 1967 the larger part of barley production will be used as feed. However, the share of barley in the composition of total animal feedstuffs will remain relatively constant, as the production of other feedstuffs is expected to increase.

The 12 per cent increase in barley production will be brought about by the use of chemical fertilizers, improved seeds and better agricultural techniques.

TABLE 56 — Production and Consumption of Main Agricultural Products

Products	Type of culture	1 9 6 3 Area 000 ha.	Yields (Kg/ha)	Production '000 tons	Consumption '000 tons Human	seed and wastage	Trade '000 tons Exports	Stocks	1 9 6 7 Area '000 ha.	Yield (kg/ha)	Production '000 tons	Consumption '000 tons Human	Seed and wastage	Trade 000 T. Exports	Stocks
Wheat	irr.	200	1 750	350	—	—	—	—	300	2 200	700	—	—	—	—
	dry.	7 550	1 040	7 850	—	—	—	—	7 200	1 150	8 300	—	—	—	—
	tot.	7 750	1 058	8 200	5 900	1 600	—	700	7 500	1 200	9 000	6 900	1 600	—	500
Barley	irr.	40	2 300	92	—	—	—	—	40	2 500	100	—	—	—	—
	dry.	2 760	1 262	3 484	—	—	—	—	2 760	1 408	3 888	—	—	—	—
	tot.	2 800	1 277	3 576	333	569	100	2 574[1]	2 800	1 424	3 988	236	576	100	2 076[1]
Maize	irr.	70	1 920	134	—	—	—	—	90	3 000	270	—	—	—	—
	dry.	640	1 400	902	—	—	—	—	710	1 670	1 180	—	—	—	—
	tot.	710	1 500	1 036	846	75	—	116[1]	800	1 817	1 450	675	90	—	689[1]
Cotton	irr.	290	424	123	—	—	—	—	400	500	200	—	—	—	—
(fiber)	dry.	370	222	82	—	—	—	—	300	230	69	—	—	—	—
	tot.	660	310	205	130	—	75	—	700	384	269	159	—	110	—
Oranges	irr.	31	850	264	251.5	—	12.5	—	35	1 010	355	305	—	50	—
Vegetables	irr.	244	16 700	3 410	3 409	—	1	—	220	18 600	4 092	4 082	—	10	—
Sugar beet	irr.	83	26 400	2 200	—	—	—	—	106	27 000	2 866	—	—	—	—
	dry.	50	9 800	500	—	—	—	—	47	8 500	400	—	—	—	—
	tot.	133	20 300	2 700	2 700	—	—	—	153	21 350	3 266	3 266	—	—	—
Meat		—	—	543	459	—	83	—	—	—	667	598	—	69	—
Milk		—	—	3 210	3 210	—	—	—	—	—	3 857	3 857	—	—	—
Industrial timber (²)		2 300	1.3	3 000	2 950	—	50	—	2 300	1.9	4 400	4 320	—	80	—
Wood for fuel (²)		3 900	2.7	10 500	10 500	—	—	—	3 900	2.7	10 500	10 500	—	—	—
Other forestry products		—	—	77	23	—	54	—	—	—	83	23	—	60	—

[1]) used as animal feed. [2]) production figures are in thousand cubic meters.

TABLE 57 — Production Projections for Main Agricultural Products

(thousand tons)

Products	1962 (1)	1963	1967
Wheat	8 030 (2)	8 200	9 000
Barley	3 444 (2)	3 576	3 988
Maize	960 (2)	1 037	1 454
Rice	115	149	230
Sugar beet	2 700	2 666	3 266
Tobacco	135	135	150
Cotton	200	205	269
Potatoes	1 400 (2)	1 750	2 000
Sunflower seeds	123	126	187
Tea	32	32	63
Pulses	400	416	495
Oranges		264	355
Peaches	86	93	120
Figs	52	55	64
Apples	249	261	309
Hazelnuts	86	95	130
Grapes	2 972	3 061	3 417
Vegetables	3 240	3 410	4 092
Olives	465	486	570
Meat	460	543	667
Milk	3 045	3 210	3 857
Wool (Non Merino)	47	47	56
Wool (Merino)	0.9	1.0	3.7
Mohair	9.8	9.8	11
Eggs	611	777	1 037
Industrial timber	2 800	3 000	4 400
Wood for fuel (1000 m^3)	10 500	10 500	10 500
Secondary foresty products	70	77	83

(1) 1962 production estimates

(2) 1956-1960 average

TABLE 58 — **Estimated Yields for the Main Agricultural Products**

Products	**Unit**	**1962**	**1963**	**1967**	**1967 Index (1962=100)**
Wheat	Kg/ha	1 048	1 066	1 210	115.5
Barley	"	1 255	1 270	1 424	113.5
Maize	"	1 500	1 500	1 800	120.0
Rice	"	2 145	2 145	3 067	143.0
Sugar beet	"	21 300	20 300	21 350	100.2
Tobacco	"	720	720	730	101.4
Cotton	"	282	300	390	138.3
Potatoes	"	9 561	10 290	11 190	117.0
Sunflower seeds	"	897	897	1 100	122.6
Tea (fresh)	"	2 000	2 200	3 150	157.5
Beans	"	1 300	1 300	1 330	102.3
Oranges	Kg/tree	40.8	42.0	51.5	126.2
Peaches	"	18.0	18.5	21.8	121.1
Figs	"	8.0	8.2	9.2	115.0
Apples	"	17.4	18.0	21.6	124.1
Hazelnuts	"	0.67	0.7	0.77	114.9
Grapes	Kg/ha	3 800.0	3 850.0	4 370.0	115.0
Vegetables	"	16 200.0	16 600.0	18 600.0	114.8
Olives	Kg/tree	8.0	3.2	9.3	116.2
Beef (carcass weight)	Kg/head	72.0	76.8	96.0	133.3
Mutton (carcass weight)	"	13.9	14.77	17.4	128.8
Cow and bufallo milk	"	522.0	602.0	798.0	152.9
Sheep milk	"	30.0	31.0	35.0	116.7
Sheep wool	"	1.4	1.45	1.7	121.4
Merino wool	"	2.0	2.1	2.5	125.0
Mohair	"	1.6	1.65	1.9	118.7
Wood for domestic use	m^3/ha	1.0	1.3	1.9	190.0

(c) Maize

Maize production is estimated to increase by 50 per cent. With slowly rising individual incomes, maize consumption for human purposes will decrease and will be consumed more as animal feed. It is considered that 50 per cent of maize production will be utilized for feed purposes in 1967 as against 10 per cent in 1962.

The expected increase in maize production will be achieved both by an increase of the areas cultivated and by higher yields. Of the increased areas sown to maize, a third will be irrigated.

This expected increase in maize production is not sufficient to further the development of intensive farming and livestock breeding. Maize will constitute only

2 per cent of total feed production and the increase foreseen in maize production will therefore not suffice to solve the feed problem in the course of the five-year plan period. It is only in the following period that maize will be used to a greater extent in animal husbandry. Furthermore, the increase planned in maize production and its use for feed instead of for human consumption depens on the balance to be reached between maize and wheat prices, as well as on that between maize prices on the one hand, and other feedstuffs and meat prices on the other.

(d) Oranges

Orange production is expected to increase by 50 per cent by the end of the plan period. Oranges have been included in this section as they are an extremely important export item. Yield estimates for 1967 are on a modest scale and are 30 per cent below present yields in other countries.

In view of the general profitability of citrus culture, even a 20-30 per cent drop in prices should not prove a deterrent to the expansion of land cultivated for this purpose.

The estimated rise in production will be achieved by (1) an increase in the number of trees (a large number of trees planted prior to 1962, not yielding fruit as yet, will come into production in the plan period); (2) higher production will obtained by applying fertilizers to about 70 per cent of the trees by 1967; (3) better care; and (4) pest control. In view of the foreseeable demand for oranges in 1975, the present number of fruit-yielding trees (approximately 5.9 million) will have to be increased by two thirds.

Orange exports for 1967 are estimated at 50,000 tons. This would correspond to 11 per cent of the total crop in the same year. The corresponding percentage for 1962 was 4 per cent. A five-fold increase in orange exports during the plan period will be possible if Turkey makes the best use of its position as a marginal exporter.

In calculating the total internal demand for oranges, the income elasticity of demand was assumed to be 1. Taking the population growth into account, demand in 1967 will increase by 32 per cent over that of 1962.

(e) Apples

It is estimated that apple production will grow by 124.1 per cent in the five-year period. It will be possible to achieve his increase by (1) planting new orchards; (2) pest control; and (3) the training of applegrowers.

(f) Vegetables

As separate data is not available for the different kinds produced, vegetables were studied as a group and a mean price was used in evaluations. Therefore, it is not possible to ascertain the share of different vegetables in the total or to show their individual rates of increase. It may be said, however, that with the increase in production of early vegetables, the value of this output will increase within that of total output.

A large part of the increase in the output of vegetables will be consumed internally. The income elasticity for vegetables was found to be 1.1 on the basis of earlier data, and this ratio was used in the plan. This elasticity is determined in accordance with current price relationships. The high margin between the price paid by the consumer and that received by the producer is now absorved by the distributive trade. If some of this intermediary trade could be eliminated, vegetable consumption would rise above the level foreseen in the plan.

The estimated exports of 10,000 tons of vegetables in 1967 will represent about 3 per cent of production. Today, exports are negligible. In order to realize this slight increase in exports, marketing organizations must be set up, sandardization applied, and above, all, favourable trade policies must be followed by European countries.

Thought, at present, vegetable growing is a fairly profitable activity, the assumption that it will develop but moderately in the plan period is due less to production difficulties than to the limited improvements that can be achieved in prices and the marketing, distribution and storage of these products.

The expected 26 per cent increase in the production of vegetables during the plan period will be attained by a 10 per cent increase in the area cultivated, and in particular, by the increased use of chemical fertilizers and the adoption of other appropriate measures.

(g) Grapes

The expected increase of 15 per cent in grape production will be attained partly by the use of fertilizers and better tending of vines, and partly by the extension of of pest control. The higher productivity of the new vines raised to replace the old plants is also taken into account. An increase in the total vine-planted area is not envisaged.

A large part of the increase in grape production will be consumed internally. Raisin exports are expected to go up by 20 per cent. Raisin exports estimated at 70,000 tons for 1962 should amount to 85,000 tons in 1967. Grape exports are almost nil at present but are estimated to reach 15,000 tons in 1967. Accordingly, 10 per cent of Turkey's grape production will be exported as raisins in 1967 compared with 9 per cent in 1962, and 0.5 per cent will be exported fresh.

Turkey's grapes, which can be sent to European markets earlier and later than these of other exporting countries, are therefore in steady demand.

(h) Hazelnuts

The internal consumption of hazelnuts will increase with population and not with incomes. It is estimated that exports of hazelnut kernels could be increased from 30,000 to 50,000 tons.

Production increases will be obtained in particular by the judicious use of fertilizers, pest control, protection and better care. The cultivated area is expected to increase by only about 4 per cent.

(i) Tobacco

It is estimated that the production of tobacco -a major export products- will increase from 135,000 tons in 1963 to 144,000 tons in 1967. Two main factors hinder a greater expansion of this production. The first is the importance attached to growing high quality tobacco. (As the area sown to tobacco extends to marginal lands and, in particular, the need for irrigation arises, the quality of tobacco produced deteriorates.) The second is the slow increase of demand, particularly on foreign markets. Even though a very small increase is expected in 1967 tobacco yields in comparison with 1963, production will not exceed the 1958 and 1957 levels.

Internal per capita consumption of tobacco is expected to increase from 1.18 kg. per annum in 1963 to 1.27 kg. in 1967.

The 1967 tobacco production should meet 1968 exports as well as 1969 home consumption. 1968 exports are estimated to amount to 83,000 tons and 1969 home consumption to 46,000 tons. With due allowance for wastage, 1967 production should therefore be of the order of 144,000 tons. As yields average 730 kg. per hectare, 197,000 hectares should be sown to tobacco in order to attain this level of production.

(j) Cotton

Cotton production is estimated to increase by 33 per cent due to the expansion of irrigatted areas and to other investments and measures. In estimating the likely increase in the area devoted to cotton growing account was taken of (1) the demand for cotton; (2) the competition for land between cotton, vegetables and citrus fruit and (3) the technical requirements of rotation. Crop will also have an effect on the increase of yields. By 1967, 57 per cent of the area sown to cotton will be irrigated and fertilized, while improved seeds will be used in the whole area. At present, 38 per cent of the total area under cotton is being irrigated. It is hoped that the entire cotton crop will be irrigated in the coming years.

According to trends in recent years, demand elasticity for cotton is 0.8.

Cotton exports in 1962 amounted to 77,000 tons. In 1963 and 1967 exports are estimated to reach 75,000 and 110,000 tons respectively. As in the case of citrus fruit, Turkey's position as a marginal exporter should make it possible for her cotton exports to attain these levels.

(k) Livestock Breeding

The balance to be realized between the production and the consumption of livestock products depends on the introduction of radical changes in the methods of livestock breeding. In 1967, total livestock products are expected to increase by 31 per cent as compared to 1963. In 1967, meat will amount to a little more than a quarter, and milk to more than one third, of the total output of livestock products.

Another goal is to obtain by 1967 an increase of roughly 20 per cent over the present level of wool production (mohair, merino and other sheep wool).

Estimating the output of animal products was not easy. Slaughterings were estimated on the basis of the total number of animals and on the breeding and death ratios in each group, rather than on the number of actual slaughterings in slaughterhouses.

The amount of feedstuffs required to meet the feel requirements of the proposed livestock programs was calculated. This amount includes the additional feed requirements arising from the introduction of a program for veterinary services, a higher rate of slaughterings, the increase of milk production and the fact that the average animal life span will be lengthened.

Per capita meat consumption in the course of the plan period is expected to rise from 14.7 kg. to 17.7 kg. This is even less than the average consumption figures of the medium income-groups. In estimating consumption figures, the income elasticity was assumed to be 1.3. This elasticity which is high in itself, can be considered low in relation to the low level of current prices. Current meat prices vary to a considerable extent between different municipal districts, and are not scaled according to quality. This has inhibitive effect on production. In order to give more incentives to production, in accordance with the directives of the plan, it is considered advisable to control on meat prices.

Milk output is expected to rise only by one fifth. The income elasticity of demand for milk has been assumed to be 0.6. In this field, account was taken of marketing possibilities, food preferences, and the time necessary for nutritional education to to produce results.

Expansion in meat production will be achieved mainly by increased slaughterings, extensive veterinary control and higher yields resulting from improved feeding methods. The animal husbandry program will begin to show substantial results only towards the end of the plan period. It is estimated that concentrates and increased supplies of better quality fodder and forage will account for 43 per cent of the total increase in animal products, veterinary control for 28 per cent, and slaughterings, at a rate intented to keep livestock numbers constant, for 23 per cent. The production of feedstuffs has been compared with estimated feed requirements.

The difference between production and consumption estimates for meat should give an exportable surplus of about 67,000 tons of meat or of live animals in meat equivalent by 1967. This figure is lower than the quantities expected to be available for export in the initial year of the plan, owing to the fact that the policy of keeping livestock numbers constant will result in a considerable increase in animal slaughterings in 1963. If full benefit is to be derived from exports of this magnitude, which will account for 10 per cent of total meat production by 1967, certain readjustments will have to be made. Feed supplies may not be adequate to meet the demand implied by this development.

It is estimated that 6,168,000 tons of feed grain, bran and oil-seed cake will be used as animal feed in 1967. This represents an increase of 2,568,000 tons over the 1962 production figure of 3.6 million tons.

The grazing capacity of existing pasture lands in 1962 is calculated to correspond to 15 million head of cattle.

As the cattle equivalent of the total number of all livestock corresponds, at present, to 24.1 million head, it means that 9.1 million livestock cannot be fed according to normal grazing requirements and that pastures are being destroyed by over-grazing.

It is planned to improve 175,000 hectares of dry pasture land and 325,000 of coastal pasture land by 1967. Furthermore, by putting 120,000 hectares of irrigated land and 320,000 hectares of barren land under a system of rotation of forage crops, the output of feed concentrates will increase by 2,568,000 tons in 1967, as compared to 1962, and this will promote the development of animal production.

The feed deficit in the plan period may also be met by U. S. agricultural surpluses. However, further measures will have to be introduced after 1967, to increase feed production, such as planting additional grasslands and improving existing pastures.

(l) Fish

As shown in Table 56, the major percentage increase in the agricultural sector is expected to occur in the fisheries sector, where production will be tripled between 1963 - 1967. Although there are rich fish reserves in Turkey's coastal and inland waters, output has remained at a low level, owing to the lack of appropriate regulations lack of adequate organization and of sufficient investments in the promotion of fishing and fish marketing.

The greatest handicap in this field is lack of organization. In order to attain the production targets set in the plan, necessary allccations have been made in the fields of fishing vessels, equipment, distribution, storage facilities, research, traninig, and credit requirements. Other measures have also been proposed.

Although there will be a general increase in fish catches, some changes will take place in the composition of landings. In 1963, 72.6 per cent of catches consisted of salt water fish, 15.7 per cent of fresh water fish, 11.4 per cent of fish for processing into oil or meal and 0.3 per cent of other sea products. In 1967, these percentages will be 73.3 for salt water fish, 12.1 for fresh water fish, 10.2 fish for processing, 4.2 for fish bred in artificial lakes and 0.2 for various other sea products.

Per capita fish consumption in Turkey has remained at a very low level owing to the insufficiency of production and the inadequacy of distribution and storage facilities. As indicated above, the fall in prices resulting from higher production, accompained by improvements in distribution and storage, will lead to the increase of per capita consumption from 2.2 kg. per annum in the sphere of exports, a considerable increase in fish exports is expected to take place.

(m) Forestry Products

Per capita consumption of timber is calculated at 0.111 m³ for 1962. This amount is estimated to increase to 0.116 m³ in 1963 and to 0.136 m³ in 1967. This means that by 1967, a 20 per cent increase over the 1962 figures will have taken place in per capita timber consumption.

The output of industrial wood is estimated to increase by 46 per cent in the five - year period. In view of the demand for paper, it is planned to set up a craft paper mill of 450,000 tons capacity which should start production in 1967. Paper production will increase to a certain extent in 1963 with the expansion of the Izmit Paper Mill.

The demand for pulpwood will thus increase by 76 per cent by the end of the plan period and will be met from national forestry production. The necessary measures have been considered to ensure that internal wood production is able to cover the pulpwood requirements of the 35,000 ton capacity mill for writing and printing paper. Construction of this mill will start at the beginning of the plan period and it will be in operation before the end of the period. On the other hand, existing sawmill factories sohuld be reorganized to give preference to softwood and larger quantities of beech timber, the utilization of which does not attract private investors. It is planned to set up two sawmills with a view chiefly to exporting seasoned and white beech lumber. At the same time the possibilities for setting up a cheap and particle board and a fiber board factory, to make use of forestry and factory residue will be investigated.

The demand for lumber, especially for building, is estimated to rise by 30 per cent at the end of the five-year period. The utilization of wood for packaging purposes, which now accounts for only 9 per cent of the total timber output, is expected to increase with the rapid development foreseen in exports of fresh vegetable and fruit.

Although the demand for firewood increases with the growth of the population, no increase can be expected in the supply of firewood as the capacity of forests in this respect has already been exhausted and production is already deficitary. To eliminate firewood shortages, it is planned to increase the output of lignite (lignite deposits are fairly adequate with regard to both distribution and reserves) and to teach people to use firewood in the most economical way. To this end, it is proposed to determine and instal the most economical types of stoves and ovens which may be manufactured by the people with the use of local materials. The aim is to eliminate firewood shortages by 1980. It is not likely that effective measures in this regard can be taken in the initial plan period, but if people can be sufficiently educated in this field, some progress may be expected in the following plan periods.

The Use of Cattle Dung as Fuel

In Central and Eastern Anatolia, where forests are few or non-existent, a considerable amount of farm manure is used as fuel. Economically, this represents a loss, because as long as this practice continues animal manure cannot be used for improving the soil and obtaining higher yields. To remedy this problem, both short and long-term measures are envisaged.

It is planned to raise lignite production, where this is feasible from the point of view of location and reserves, and to supply lignite to the areas where the use of animal manure as fuel is prevalent. At the same time, as indicated in the forestry program, it is proposed to educate people in these areas to use less manure as fuel and more farm waste products in hearths, and, where possible, to adopt the use of stoves. The proposed long-term measures will consist in encouraging the planting of fast-growing trees where weather conditions are suitable, and in providing credit for this purpose. A survey is to be undertaken with the object of determining the calorific power and mining possibilities of lignite resources. It is not to be expected that effective action can be taken in the initial plan period to restrict the use of animal manure as fuel, but if the educational program can be started rapidly and satisfactorily, it is though that some appreciable results will be obtained in the following periods.

INVESTMENTS

The investments to be made in the various branches of the agricultural sector in the five - year plan period are shown in Table 59. Total agricultural investments in this period (with the exclusion of investments of 123.8 million TL. devoted to agricultural training purposes) amount to 11.3 bilion TL. Of the 11.3 billion TL. 725 million TL. or 6.5 per cent of the total, represent the non-monetized contributions of farmers. The distribution of these total investments by years is as follows : 11.3 per cent in 1963, 16.2 per cent in 1964, 20.7 per cent in 1965, 24.6 in 1966 and 27.2 per cent in 1967. Thus, since investment resources will increase with the rate of growth, investments in 1967 will be 2.4 times higher than those in 1963.

Total agricultural investments in the five-year period are broken down as follows · 45.3 per cent for irrigation: 15.0 per cent tractors and farm equipment; 6.1 per cent for land improvement; 8.8 per cent for forestry; 4.2 per cent for animal husbandry; 2.6 per cent for fisheries; and the remaining 18 per cent for other agricultural branches. As can be seen from these shares slightly less than half of all investments in the sector will be devoted to improving present irrigation networks and to building new irrigation systems. This was considered apropriate in view of the vital importance of irrigation for agricultural production, and particularly in order to achieve a 7 per cent growth rate. Such an investment will make it possible to put an additional area of 515,000 hectares under irrigation and to improve the existing State Irrigation Systems in the five-year period. In determining the targets relating to the size of areas to be irrigated, and to investments, account was taken of the extent of irrigated land needed for the cultivation of various crops, the aggregate capacity of the agencies concerned with these activities, and the investment needs of other agricultural services.

After investments are made, a year will elapse before the new irrigation networks can go into operation. Therefore, the effect of the irrigation investment of 1,503.6 million TL. made in 1967 (see Table 59) will only be seen on 1968.

The next largest group of investments, which concerns tractors and equipment, will total 1,690 million TL. The basic aims is to increase the present number of tractors by 14 per cent, thereby bringing the number of tractors in working condition to 48,000 by 1967. Taking into acount the condition of existing tractors, it is planned to provide the agricultural sector with 30,000 new tractors in the five-year period. Estimates were made as to the minimum amount of agricultural equipment technically required to realize the target production increase in agriculture. The amount of such heavy and expensive items as combines, which are highly labor-saving, has been kept fairly low.

684 million TL., or 6.1 per cent of total investment in the five-year period, will be spent (1) on the improvement of pastures to meet the feed requirements of the animal production sector; (2) on the prevention of erosion; (3) on terracing and similar works for new vineyards, orchards, hazelnut and olive groves, and on the reclamation and drainage of marshes and swamps.

The larger part of the forestry investments made in the plan in the plan period will be devoted to projects designed to increase the output of forestry products. Investvestments will be directed particularly to the construction of forest roads and to the plantation of fast-growing tree species in areas where soil conditions are favorable.

In order to realize the desired development in agriculture, investments in extension, and agricultural training and measures to promote the relevant institutions and services are also essential. The amount appearing under agricultural extension in Table 59 does not cover total investments in this field. The following sums will also be spent on agricultural training and extension : 124 million TL. of total investment in education; 46 million TL. of total investment in soil conservation; and 20 million TL. of total investment for plant protection. Furthermore, 25 million TL. of forestry investment and 12 million TL. of fisheries investments will be spent on research, extension and training services. Thus, investments in agricultural extension and training amount to more than the figure of 107.5 million TL., given in Table 59, and actually reach the sum of 409 million TL. Consequently, the share of investment in the fields of extension and training in investments, rises to 3.6 per cent .

13.8 per cent of the total agricultural investments in the plan period, or the foreign currency equivalent of approximately 1.5 billion TL. will be spent on imports of agricultural machinery, equipment, tools and breeding stock. The share of foreign currency investments in total investments will decrease gradually from 15.1 per cent in 1963 to 13.3 per cent in 1967.

The largest part of investment expenditures in foreign currency in the five-year period will go to irrigation (38.2 per cent), followed by tractors and equipment (22.5 per cent), forestry (7.5 per cent) and fisheries (5.9 per cent).

It is estimated that public and private investments will account for 67.3 and 32.7 per cent respectively of total investments in the five-year period.

TABLE 59 — Investments in Agriculture (Million TL.)

Investments	1963	1964	1965	1966	1967	Total
Irrigation						
a. New works	340.7	758.6	1 095.9	1 414.3	1 503.6	5 113.1
b. Improvement of existing networks	20.0	40.0	60.0	80.0	120.0	320.0
Land Improvement						
a. Conservation and improvement	50.0	60.0	80.0	90.0	120.0	400.0
b. Meadow	10.5	18.8	31.7	42.9	64.9	103.8
c. Drainage	17.5	21.0	21.0	28.0	28.0	115.5
Tractors and Equipment						
a. Tractors	174.0	174.0	174.0	174.0	174.0	870.0
b. Equipment	141.8	146.1	160.1	181.8	190.7	820.5
Extension services	12.0	15.2	20.5	25.8	34.0	107.5
Research	20.0	20.0	25.0	25.0	33.0	123.0
Soil conservation	15.0	17.2	20.0	20.0	20.0	92.2
Plant protection and pest control	18.6	18.9	31.2	31.2	44.2	144.1
Seedling and seed production	13.8	12.9	12.9	14.9	15.0	69.5
Livestock						
a. animal husbandry services	89.9	93.0	97.8	77.7	89.2	447.6
b. breeding stock	10.5	11.0	7.0	2.0	—	30.5
Simple processing units and greenhouses	22.0	39.8	40.3	49.8	54.5	206.4
Storage	10.0	15.0	20.0	25.0	30.0	100.0
Meteorological services	7.5	6.0	5.0	5.0	5.0	28.5
Land reform	10.0	10.0	10.0	10.0	10.0	50.0
Flood control	30.0	40.0	50.0	60.0	70.0	250.0
Forestry	163.3	175.2	202.6	217.3	228.5	986.9
Fisheries	37.0	43.0	58.0	73.0	84.3	295.3
Expenses for renewal of spare parts and unforesseen outlays	60.7	86.8	112.2	132.4	146.0	538.1
TOTAL INVESTMENTS	1274.8	1882.5	2335.2	2780.1	3064.9	11277.5
Investments in irrigation, in land improvment and in animal husbandry will be met up to 10, 20 and 10 % respectively by unpaid farm labor. Amount of contribution	61.6	110.3	153.2	190.1	213.9	729.1
Agricultural Training (Education prog.)	32.2	22.3	23.5	23.9	21.9	123.8

VALUE ADDED IN AGRICULTURE AND OTHER DEVELOPMENTS

a. Value Added

In calculating the value added, the production value of the different agricultural sectors was first computed. This was found by (1) multiplying the estimated output in each sector by the prices (*) received by farmers, and (2) subtracting from this figure the value of the inputs produced within the agricultural sector. (**) This made

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(*) The producer prices used are those given for 1960 in Publication No. 421 (Agricultural Structure and Production) of the Central Statistical Office.

(**) As statistical analysis gives gross values for grain feed, hay, animal labor, the animal manure used on the farm and the vegetable production used for seed, estimates were made on this basis and the value of seeds was therefore included in the agricultural inputs.

it possible to avoid double counting for products used as inputs. The value of these products is included in the computation of value added shown in Table 62. The value added in agriculture was obtained by deducting from the gross agricultural product the value of non-agricultural products (inputs of non-agricultural sectors in the table) utilized in agricultural production.

The gross value of the produce of various agricultural sectors is given in Table 60. As seen from the 1967 production estimates (given in index form in this Table), the highest percentage increase is expected to take place in fish, pulses, forestry products, commercial crops (e.g. cotton, sugarbeet, tobacco, flax, oil seeds, etc.), and livestock products. In all these sectors, increases of over 30 per cent are expected. An increase of 25 per cent is expected in vineyard and garden production and of 15 per cent in cereal production. As a result of the different rates of increase, changes will occur in the shares of different products in the value of total gross production. According to these estimates, the share of cereals in the value of total gross production will fall from 23.1 per cent in 1962 to 21.3 per cent in 1967. The shares of sectors of production other than forage crops and pastures will rise in varying proportions while that of vineyard and garden production will remain constant. These figures indicate a shift towards more intensive farming.

An increase of 26 per cent is expected to take place in the value of total agricultural production in the five-year period at the annual rate of increase of 4.7 per cent. The annual rate of increase averaged about 4.1 per cent in the 1952-1959 period.

The inter-sectoral inputs deduced from the gross value were explained previously. Inputs from non-agricultural sectors are shown in Table 61. Total fertilizer requirements were calculated on the basis of production estimates for the different groups of products.

TABLE 60 — Value of Gross Production in the Agricultural Sector (1)

(billion TL.)

Groups of products	1962	1963	1967	1967 Index (1962=100)
Cereals	8.03	8.27	9.26	115
Pulses (2)	0.69	0.75	1.21	175
Fruit and vegetables	6.84	7.17	8.52	125
Industrial crops	3.67	3.90	4.84	132
Animal products	9.19	9.97	12.05	131
Grass, pasture and hay (3)	5.24	5.32	5.97	114
Forestry Products (4)	0.83	0.88	1.15	138
Fish	0.20	0.21	0.56	280
TOTAL	**34.69**	**36.47**	**43.56**	**125.6**

(1) Value found by multiplying production figures by the prices received by farmers in 1960.

(2) Including pulses for fodder.

(3) Including the value of pastures, forage and hay.

(4) Value added (net product).

TABLE 61 — Annual Non-Agricultural Inputs of the Agricultural Sector

(Million TL.)

	1962	1963	1967	1967 Index (1962=100)
Chemical fertilizers	80.0	143.1	420.8	526.0
Liquid fuel	128.9	135.5	150.9	117.1
Pesticides	80.8	129.8	295.9	366.2
Veterinary	15.0	84.5	89.5	596.6
Imported seeds	0.8	3.0	5.0	625.0
Tractors and transport equipment	86.2	88.9	95.1	110.3
Feed concentrates	276.8	376.4	565.0	204.1
Horseshoes and other implements connected with animal husbandry	150.0	150.0	150.0	100.0
Cotton carding and baling material (1)	17.5	20.4	26.9	153.7
Hand tools (used annualy) (2)	50.0	52.5	70.0	140.0
Others (3)	50.0	52.5	70.0	140.0
Fishing implements	13.0	15.0	45.0	346.0
TOTAL	**949.0**	**1 251.6**	**1 984.1**	**209.1**

(1) Hoops, buckles, canvases, etc.
(2) Hoes, spades, shovels etc.
(3) Sacks netting, wires, baskets, putty etc.

TABLE 62 — Value Added in Agriculture

	1962 Mil. TL.	Value Mil. TL.	Index 1962=100	1967 Mil. TL.	1967 Index 1962=100
Gross production value (1)	34.69	36.47	105.2	43.56	125.6
Sector inputs	10.64	10.89	102.3	13.13	123.4
Gross product (Gross production value minus sector inputs)	24.05	25.58	106.4	30.43	126.5
Inputs from non-agricultural sectors	0.95	1.25	131.6	1.98	209.1
Value added (Gross product-minus (non agricultural inputs)	23.10	24.03	104.0	28.45	123.2

(1) Including fisheries and forestry.

Liquid fuel inputs cover the fuel requirements of the number of vehicles estimated to be held by government enterprises and by farmers. (1) The demand for agricultural pesticides and medicines was estimated with reference to the areas to which it was considered possible to apply plant protection, to the livestock numbers to which veterinary services could be extended, and to requirements in case of epidemics. Concentrated feeds include bran, oil cake, molasses and other concentrates of the feed industry. Expenditure on cotton cards and bales was estimated according to production targets in cotton. Inputs such as horse shoes and hand tools and inputs termed "other" were estimated on a general basis. 80 per cent of non-agricultural inputs in 1963 as well as in 1967 are those that will be used the private sector. The considerable increases expected in items such chemical fertilizers and concentrates will have the effect of raising the share of private sector expenditure. The estimated annual foreign exchange requirements for these inputs amount to 20 per cent of the total for 1963 and to 18.7 per cent in 1967. In determining these figures the requirements of the agricultural sector were weighed against production forecasts in the related sectors.

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(1) The yearly allowance of gasoline for gasoline tractors is 3.3 tons; the allowance of kerosene for kerosene tractors, 3.6 tons and of diesel oil for diesel tractors, 2.8 tons. Average fuel needs for motor vehicles are estimated at 3.7 tons of gasoline per annum.

The most important increases in non-agricultural inputs will be in fertilizers, pesticides, veterinary specialties and feed concentrates. Total non-agricultural inputs will increase by 109.1 per cent in the five-year period. The figures obtained for value added in the five-year period show an increase of 23.2 per cent at an approximate rate of increase of 4.2 per cent per annum.

b. Effect of the Five-Year Plan on Employment

There is considerable unemployment or disguised unemployment in the agricultural sector. The extent to which this problem may be solved by the five-year plan is discussed below.

The agricultural program will affect labor in two ways. First, employment will be created by the investments to be made in agriculture during the five-year period. The effect of investments in construction and land improvement has been assessed in the section on construction. Secondly the need for manpower will increase as a result of the operation and maintenance of the undertakings set up by these investments, and of more intensive farming.

The most important effect of the plan on the manpower situation, however, is that it will create more work for agricultural producers, provide large numbers of seasonal workers, who are now occupied for only very short periods each year with the possibility of working for longer periods and create new work opportunities for the unemployed.

In calculating the additional manpower requirement sof the agricultural sector, the labor requirements of the main crops under both irrigated and dry farming were firts determined and additional requirements were found according to the increase in irrigated areas.

With the higher yields to be obtained from the application of the extensive fertilizer program and the use of improved seeds, it was considered that additional manpower would be required for harvesting, threshing and loading operations and for the various operations connected with fertilizers. Estimates were also made of the extra working days needed for farming that part of the acreage under fallow which is expected to be cultivated in the plan period and for making use of part of the lands which are presently not exploited.

It has been assumed that farmers who are underemployed today would be occupied for an additional period of 75 workdays (90 calender days) each year. The number of additional work days found according to the estimates made above was divided by this figure, and the number of workers who will be provided with additional work opportunities was thus determined.

In 1967, the annual working time of 2.638 million workers (farmers or agricultural workers) will be lengthened by three months, as compared to the time worked in 1962.

The plan will also have the effect of creating additional labor requirements in connection with the operation and maintenance of the various works to be set up (irrigation canals, pasture improvement, terracing and ditching) and with the forestry services which are expected to expand yearly in the course of the plan period. The need for additional workers which will be created by 1967 by these work programs is estimated to amount to 65,000 workers (on the basis of 150 workdays or 180 calendar days).

EXPORTS AND IMPORTS

a. Exports

It is estimated that exports in the plan period will continue to consist mainly of agricultural products. The traditional export products will show the same trends as in the past, but there will be important expansion in exports of fresh fruit, live animals, fish and foresty products. The developments foreseen in exports of major products in 1967, with reference to export estimates for the year 1962 are shown in Table 63.

TABLE 63 — Indices for Export Estimates in 1967 (Base year = 1962)

Products	(1962=100) 1967 Index	Products	(1962=100) 1967 Index
Barley	100	Tobacco	104
Oranges	500	Lentils	116
Lemons	250	Sheep	216
Dried figs	120	Cattle	187
Grapes	750	Goats	225
Raisins	120	Wool	220
Peaches	533	Mohair	145
Fresh vegetables (1)	500	Fish	374
Hazelnuts	166	Oil seeds	62
Pistachio-nuts	125	Industrial wood	754
Cotton	137	Forestry by-products	441

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(1) As exports of vegetables in are negligible, 1967 indices were established with reference to 1963 export expectations.

Exports of fresh fruit and vegetables are expected to increase mainly as a result of the growing demand for these products on European markets, of the high quality of the domestic production of grapes, vegetables and peaches, and of the advantage conferred by earlier crops. For products such as oranges, lemons etc., the position of Turkey as a marginal exporter is an aset. An increase in exports of live animals is to be expected in connection with the policy of keeping livestock numbers constant and of the favorable effect this policy will have on exports.

The estimated level of exports of certain products in the coming years is given in Table 64. A comprehensive survey of export problems and of measures to be taken in this field is made in the general section on exports.

TABLE 64 — Estimated Exports of Agricultural Products (thousand tons)

	1962	1963	1967
Barley	50.0	100.0	100.0
Canary seed	12.0	12.0	13.0
Fresh vegetables	—	4.0	20.0
Oranges, tangerines	10.0	12.5	50.0
Lemons	10.0	12.5	25.0
Apricots (fresh)	—	1.0	5.0
Apricots (dried)	1.5	1.7	2.5
Peaches	3.0	5.0	20.0
Grapes	2.0	3.0	15.0
Raisins	70.0	75.0	85.0
Figs (dried)	35.0	37.0	45.0
Hazelnuts (shelled)	30.0	40.0	50.0
Pistachio nuts	4.0	3.5	5.0
Cotton	80.0	75.0	110.0
Tobacco	80.0	76.0	83.0
Lentils	30.0	31.0	35.0
Chickpeas	5.0	2.0	6.0
Broad beans	5.0	5.0	7.0
Sheep ('000 head)	300.0	350.0	650.0
Bovines ('000 head)	80.0	90.0	150.0
Goats ('000 head)	200.0	250.0	450.0
Mohair	5.5	6.0	8.0
Wool	5.0	5.0	11.0
Goat hair	0.6	0.5	0.8
Oil seeds	22.2	13.0	13.8
Industrial wood ('000 m^3)	10.0	45.0	80.0
Forestry by-products	13.6	54.0	60.0

b. Imports

In addition to sugarbeet, cotton and rice seeds, agricultural imports consits of wheat, vegetable oils, tea and merino wool. Wheat and vegetable oils are imported from the U. S. within the framework of the agreement on agricultural supluses. In the last few years, wheat production has not increased sufficiently to keep pace with demand, and this has led to a depletion of stocks. Therefore, it is estimated that in 1963, 1964 and 1965 500,000 tons of wheat will have to be imported to replenish the stocks of the Soil Products Office (T. M. O.) and allow the re-building of farm stocks to the usual levels. These estimates, which are based on the assumption of normal weather conditions may have to be revised according to actual results, and the possibility that wheat imports will be continued after 1965 is not excluded.

Probable developments in the demand for vegetable oils are considered in the section on foodstuffs with regard to the consumption and production of oilseeds, which are the raw materials for vegetable oils, are limited. This is due partly to the fact that in some cases oilseeds are cultivated as by-products and the scope for increasing their area of cultivation is limited, and partly to the diseases which befall some of these seeds as well as to deficiencies in organization. The estimates made in the section on foodstuffs with regard to the consumption and production of vegatable oils show yearly import requirements of 55,000 tons of oilseeds for the five-year plan period.

The level of production and of stocks in tea is such that imports will no longer be necessary after 1963, save for certain quantities for blending purposes. As a result of this, certain quantities of domestic tea may be available for export.

Imports of merino wool in the plan period will amount to approximately 11,000 tons per annum.

The machinery, equipment, fertilizer and pesticide import requirements of the agricultural sector are to be found in the sections dealing with investments and non-agricultural inputs.

TECHNICAL IMPROVEMENTS IN AGRICULTURE, BALANCED LAND USE AND RELATED MEASURES

a. For the successful implementation of the agricultural program, a radical change must take place in the present system of farming. Agricultural production in Turkey cannot be increased any further by the extension of arable land or by minor adjustments. The problems that have to be solved today are how to decrease the amount of land under cultivation, to control erosion and to arrive at a balanced pattern of land use. In order to achieve the latter, a better balance between the development of mountainous regions and of plains should be established and the relationship between agriculture and industry improved. In view of the limited resources available and of the pressure of population, these improvements can only be realized in the long-term.

b. Promotion of Intensive Farming

Table 65 shows the initial progress which will be made in the five-year plan period towards the attainment of the long-term objective of balanced land use. In the last ten years, the area devoted to pasture has been reduced annually by approximately one million hectares. Table 65 shows that this trend will be arrested. A shift towards more intensive farming can also be seen from this table. The measures to be taken to accelerate this trend are the following :

(1) Land Improvement and Soil Conservation

Priority will be given to measures designed to protect land resources from water and wind erosion, and to improve and reclaim land that can be made suitable for agriculture. Legislation will be prepared by the Ministry of Agriculture in order to prevent the ploughig up of further pastures, to ensure that existing pastures are improved and to regulate grazing and the use of pastures. In seeking to establish a balanced land use, it is essential to prevent further conversion of pastures into arable land. A better balance will be obtained in the long run by decreasing the area of lands under cultivation, particularly those that are marginal.

TABLE 65 — Land Use

	1963 (Million ha.)	%	1967 (Million ha.)	%
Geopraphical area	77.7	100	77.7	100
Agricultural land (1)	25.3	32.5	25.4	32.7
a. arable	15.3	19.7	15.7	20.3
b. vineyards and orchards (2) ...	2.1	2.7	2.3	2.9
c. fallow	7.9	10.1	7.4	9.5
Pastures and grassland	28.7	36.9	28.7	36.9
Forests	10.6	13.7	10.7	13.7
a. productive	3.9	—	4.3	—
b. degraded	6.7	—	6.4	—
Unproductive lands	13.1	16.9	12.9	16.7

(1) Total cultivated area plus orchards and vineyards, and fallow lands.
(2) Includes orchards, vegetable gardens, olive groves, vineyards and tea plantations.

(2) Crop production will be intensified.

(a) Fallowing should be reduced by rotating cereals with leguminous feed crops. As shown in Table 65, it is estimated that by 1967 fallow land will have been reduced 6.5 per cent. It is not possible to raise this percentage in the five-year period as organization in this respect is on a limited scale.

The Ministry of Agriculture, in cooperation with the Soil Products Office (T.M.O.) and the State Sugar Company, will carry out the program for the diminution of the acreage of land under fallow.

(b) Irrigation is one of the most important factors in the deveolpment of intensive farming and in raising productivity. It is estimated that about 25 per cent of Turkey's water resources have been partly improved. In view of the fact that there is practically no more scope for increasing the area under cultivation, great attention must be paid to the development of existing water resources.

Table 66 shows the areas of cultivation of different crops which will be irrigated in the plan period. As intensive farming progresses with irrigation, the share of the land under cereals in irrigated areas will decrease. However, in view of the necessity of including grains in rotation as a winter crop and of the farmers' custom of growing their own cereal requirements, the acreage under cereals is expected to remain in neighbourhood of 20 per cent of the total area under irrigation. Another factor which confirms this estimate is the necessity, due to limited water resources, of rotating cereals in the lands lying between irrigated areas.

	1962 Irrigated Area				1967 Irrigated Area			
Crops	Surface ('000 ha.)	% of total Irrigated Area	Index	Non-irrigated Area	Surface ('000 ha.)	% of total Irrigated Area	Index	Non-irrigated Area
Wheat	200	17.9	100	7 500	300	18.4	150	7 200
Cotton	250	22.4	100	470	400	24.5	160	300
Vegetables	200	16.1	100	—	220	12.3	111	—
Citrus fruit	25	2.2	100	—	37	2.3	148	—
Other fruit	145	14.8	100	1 960	173	11.8	117	1 837
Maize	70	6.3	100	640	90	5.5	127	710
Sugarbeet	82	7.3	100	51	105	6.4	128	47
Rice	60	5.4	100	—	75	4.6	125	—
Feed and forage crops	30	2.7	100	—	130	8.0	500	—
Others	53	4.7	100	5 899	100	6.1	213	6 241
TOTAL	**1 115**	**100**	**100**	**16 250**	**1 630**	**100**	**146**	**16 335**

Note :

1. No reliable statistical data on irrigated areas are available. The total area currently under irigation is estimated at 1,115,000 hectares.

2. In the five-year plan period, an additional area of 515,000 hectares will be irrigated, 100,000 hecetares of this area will be irrigated by means of minor water works.

3. In 1962, two crops will be obtained from 50 per cent of the vegetable growing area (summer and winter vegetables) and from 15 per cent of the areas under wheat and other crops. In 1967, two crops will again be obtained from 50 per cent of the area under vegetables while the percenetage will rise to 40 per cent in the areas sown to wheat and other crops.

4. Thus, in 1962, two crops will be obtained on 130,00 hectares (11.5 per cent of the total irrigated area) and in 1967 on 285,000 hectares 17.5 per cent of the total irrigated area).

With the realization of the program for the irrigation of an additional area of 515,00 hectares the percentage of irrigated land within total agricultural land will increase from 4.3 to 6.3 per cent. Moreover two crops are expected to be grown each year on 11.5 per cent of the total irrigated area at beginning of the five-year period and on 17.5 per cent by 1967. The areas to be irrigated in the plan period were determined with regard to the levels of production to be attained, soil classification and unit yields under dry and irrigated farming, and existing limitations in the sphere of organization.

Priority will be given, on the one hand, to irrigation studies in underdeveloped regions which have a high economic potential in land and water resources and would benefit particularly from irrigation, and on the other, to studies and projects for small water works in dry underdeveloped regions where there are no large and continuously flowing rivers to warrant the construction of large irrigation units. The construction of these small water works will be started as soon as possible.

To obtain full returns from irrigation works, it is essential to undertake complementary investments in canal distribution systems and farm irrigation works and to ensure, that the use of fertilizers and of improved seeds, pest control and advisory services are introduced on large scale in the regions of irrigation. Irrigation programs will thus be coordinated with extension programs.

The development of regions irrigated by the newly completed State Irrigation System will be given priority. The success of State irrigation works will be enhanced by the setting up of farmers irrigation associations. It is essential to promote this, both in connection with existing systems and with those that will be constructed later. Farmers who are willing to associate in such groups and to construct irrigation works will be financially supported and supplied with credit by the State if the projects submitted by them are considered to be economically sound.

The legislation for ensuring that irrigation projects are executed together with consolidation programs with a view to deriving greater benefit from the former, and for regulating water usage rights will be prepared by the Ministries of Agriculture, Public Works, Justice and Internal Affairs.

(c) Chemical Fertilizers

It is estimated that the annual consumption of fertilizers will exceed one million tons by 1967. If the supply of agricultural products is to meet estimated demand, fertilizer consumption must not fall short of the yearly levels indicated in Table 67. Even though a five-fold increase in fertilizer consumption in the space of five years may appear excessive, it is thought to be feasible, in view of the present low levels of consumption and of the pressure created by the limited amount of cultivable land available.

The execution of the fertilizer program will be facilitated by the maintenance of the relationship prevailing in 1961 - 1962 between crop and fertilizer prices. In addition provision should be made for setting up a central distribution scheme which will ensure that fertilizers are available in regions of production in accordance with the requirements of different crops. Credit facilities and advisory services must also be provided. The Ministry of Agriculture will be responsible for the distribution of fertilizers, and will make the necessary arrangements in cooperation with the Ministries of Industry and Commerce. The output of home-produced fertilizers will enjoy guarantee of purchase. Additional requirements will be met by imports. Imports will be regulated by the Office of Agricultural Supplies, taking into account the production of domestic fertilizer plants.

TABLE 67 — Fertilizer Requirements **(In '000 tons)**

	1963			1967		
	Nitrogenous	Phosp. acid	Potash	Notrogenous	Phosp. acid	Potash
CEREALS						
Wheat	20.0	44.4	—	97.0	313.0	—
Barley	—	26.6	—	—	66.7	—
Maize	6.0	4.4	0.8	56.1	44.3	5.0
Rice	2.0	2.2	—	10.0	11.0	—
Total	28.0	77.6	0.8	163.1	435.0	5.0
FRUIT	45.0	47.2	8.4	60.0	55.5	10.0
VEGETABLES	25.0	12.7	7.0	40.0	17.7	9.6
Total	70.0	59.9	15.4	100.0	73.2	19.6
INDUSTRAL CROPS						
Potatoes	4.0	3.3	1.4	9.0	8.3	3.6
Surgarbeet	21.5	16.1	—	29.0	26.6	3.8
Cotton	37.0	83.3	—	118.0	133.4	—
Oilseeds	3.5	0.5	1.6	9.9	18.3	3.0
Total	166.0	103.2	3.0	165.9	186.6	10.4
MEADOWS AND PASTURES	4.0	6.6	—	35.0	62.2	—
OTHERS	—	30.0	2.4	2.0	8.0	1.0
TOTAL	**168.0**	**277.3**	**21.6**	**465.0**	**765.0**	**36.0**

Fertilizer needs in 1963 are estimated at 466,900 tons.

Fertilizer needs in 1967 are estimated at 1,266,000 tons.

The amount of the credit fund to be devoted exclusively to the purchase of fertilizers will be proposed by the Ministry of Agriculture. This fund will be supported by contributions from the Ministries of Finance, Commerce, Agriculture and from the Agricultural Bank. In view of the importance for the fertilizer program of giving credit in kind, the Agricultural Bank, working through the central distribution system, will have to take appropriate measures to this effect.

Some two hundred officals of the Ministry of Agriculture will be sent to the districts where crops which require fertilizers are cultivated, for the sole purpose of training farmers in, and stimulating the use of fertilizers.

(d) Improved Seeds

In areas where quality seeds are used, output is estimated to rise on average by 10 per cent. In the case of maize and cotton, the increase may be even higher. The importance of using improved seeds to promote standard crops as well as higher yields has been recognized in the plan. Annual requirements in certified seeds for different crops amount to about 400,000 tons. It is estimated that only a quarter of these requirements are met today. Given the need to solve the seed problem as soon as possible, it is aimed to supply three quarters of the seed quantities needed by 1961. The Ministry of Agriculture is taking steps to ensure that this target can be attained. The State Farms (Üretme Çiftlikleri) in particular will be responsible for producing the amount of certified cereal seeds needed, and will carry out this work in acordance with the technical specifications set by the Office for Agricultural Research and Seed Certification of the Ministry of Agriculture.

A definite program must be followed in order to meet total requirements in cotton seed during the five-year period, as well as to solve the problem of improved seeds for such major oilseed plants as sun-flowers and peanuts.

The seed stations set up by the Ministry of Agriculture will work at full capacity to produce the seeds needed for the improvement of pastures and the development of forage production to the level desired. In the execution of seed programs, contracts will be made with farmers, and the Agricultural Bank of Turkey will allocate credits for this purpose to an amount to be determined by the Ministry of Agriculture.

(e) Annual requirements in young fruit trees and vine shoots during the plan period have been estimated at about 40 million trees and shots. Today, approximately 20 per cent of this demand is met by nurseries controlled by the Ministry of Agriculture. By 1967, 40 per cent of yearly requirements is expected to be grown on official nursery station and on private nurseries complying with the specifications of the Ministry of Agriculture.

Requirements in young forest trees in the plan period amount to approximately 1,500 million trees. It is foreseen to meet these needs by developing existing forest nurseries and by setting up new ones, and to reafforest 324,000 hectares of forest areas with the production from these nurseries.

(f) Pest Control

The State will play a primary role in pest control during the plan period. Official control organizations will undertake campaigns, with the participation of farmers, for the elimination of such insects as weevils and locusts which cause extensive damage to crops, and for the control of epidemic diseases. In cases where damage is less extensive, it is intended that the State should direct, and if necessary, control the campaigns undertaken by the farmers. The development of plant protection activities by agricultural producers themselves will be encouraged. Their work, however, will be controlled by offical organizations to ensure that it complies with the general campaing program and is technically adequate.

(g) Mechanization

This subject was studied from the viewpoint of traction power and that of the diverse machinery used in agricultural activities. It is estimated that the number of tractors will increase by about 14 per cent in the plan period. This increase is considered to be sufficient for the time being, as stress will be laid in this period on maintaining existing tractors in good working condition rather than on increasing their numbers. The subject of traction power is dealt with in more detail in the section on animal husbandry.

With regard to the machinery requirements of the different branches of agricultural activity, priority was given to the supply of machinery which is technically desirable but is not labor-saving on a substantial scale. It is estimated that, at the end of the plan period, the number of combines will have decreased by 30 per cent in comparison with present figures. It was calculated on the other hand that the number of animal drawn grain drills should be increased by 230 per cent in the same period. Drill requirements were evaluated with reference to the area of two million hectares that is estimated to be spread with fertilizers. As it is intended to solve the problem of seed improvement in the plan period, it is aimed to meet the total requirements in selectors, amounting to 6,000 in the same period. Although they are labor-replacing, it was considered necessary to increase the number of harvesters. The number of animal-drawn ploughs is expected to increase annually by 30,000, on the basis of the figures for the last seven years.

c. Problems in Animal Husbandry

The study of animal husbandry raises the problem of land use from whatever angle it is approached. The possibility of reconverting to grass the whole of the marginal lands put under cultivation in the last ten or twelve years must be excluded. Action in this regard will consist merely in preventing the ploughing up of further pasture lands during the plan period and, in the longer run, in encouraging the reconversion to grass of some of the marginal lands sown to crops. It is considered possible to prevent, to some degree, the pressure on pastures from increasing by keeping the number of cattle constant, reducing that of goats and developing the culture of forage crops.

(1) The problem of over-grazing

Table 68 shows the rate of overgrazing in Turkey acording to a rough estimation of the grazing capacity of existing pastures and the number of animals grazing them.

TABLE 68 — Overgrazing of Pastures

	Million Hectares	Capacity in Millions of livestock units	
Normal Pastures	8.2	8.2	(1)
Poor Pastures	20.4	6.8	(1)
TOTAL	28.6	15.0	
Existing livestocks units		18.6	(2)
Overgrazing		24 %	(3)

(1) Estimated on the basis of grazing conditions prevailing in Turkey.

(2) The equivalent, in livestock units, of the present number of 76 million animals is 24.1 million. By excluding goats, mules, horses, and camels from these figures, the number of livestock units falls to 18.6 millions.

(3) 18 6 x 100/15 = 124

As goats, mules, horses and camels, of which large numbers are grazed on pastures, are not included in these estimates, overgrazing is actually higher than shown in the table. The pressure of excessive animal numbers also shows itself in forest areas. Technically, it should be posible to solve this problem by large-scale reduction of the livestock population, by preventing the grazing of animals in forest areas and by encouraging livestock farming together with forage production. Various obstacles, however, stand in the way of such solutions. There are no cadastral surveys showing the areas where livestock pressure is excesive. The location of pastures which are capable of improvement has not been precisely determined. The fact that farming families keep one or two animals for their own food requirements makes any radical solution of this problem socially difficult. Added to this are organizational limitations. Nevertheless the following measures have been recommended:

(a) to determine by means of sample methods and a cadastral survey, yielding quick results, the different types of pastures;

(b) to keep statistics of the number of animals held by herd owners;

(c) to make clear, in the legislation on pastures to be issued, those persons who are entitled to benefit from pastures and under what conditions they may do so. A limit will be set to the number of herds belonging to the same owner which can be grazed on public or common pasture;

(d) to develop forage crop farming, as already mentioned in the case of better land use. With regard to the competition in land use between forage and other crops, it is foreseen that, with the application of the forage production program, approximately 14 per cent of animal feedstuff requipements will be met by 1967;

(e) to aim at improving an acreage of 500,000 hectares of pasture land during the plan period. The activities of the Ministry of Agriculture with regard to pasture improvement will be geared to attain this target;

(f) to reduce the number of draft animals. This is not considered possible within the plan period but only in the longer run. In the plan period, it is aimed to incraese the yield of draft animals by keping their numbers constant and raising feed supplies by 5 per cent. It is moreover considered advisable to promote the use of animals for work purposes only instead of for dual purposes.

It is estimated that existing traction capacity is not utilized in the same degree in all parts of the country. However by taking 8 hectares (1) of land as the area corresponding to one unit HP, it is estimated that, in terms of a national average, aproximately 80 per cent of existing traction capacity is actually utilized today. In view of the fact that intensity (2) is estimated to increase by about 20 per cent in the plan period, it is considered that a large part of this unused tractive power capacity of 20 per cent will be utilized. This being so, it is considered that the increase of 14 per cent in the number of tractors during the plan period will be barely sufficient to meet traction requirements in view of the fact that certain farm activities must be completed within a definite time limit;

TABLE 69 — Draft Power (tractors and animals) in 1963 and 1967

	1963		1967	
	Number.	Million HP	Number	Million HP
Tractors (thousands)	44.3	1.0 (1)	48.0	1.1 (5)
Oxen (millions)	4.0	2.0 (2)	4.0	2.2 (2)
Water buffaloes (millions)	0.4	0.3 (3)	0.9	0.3 (3)
Horses and mules (millions)	0.9	0.7 (4)	0.9	0.7 (4)
TOTAL		4.0		4.1

(1) The average power of tractors is taken to be 25 HP. 10 per cent of the total number of tractors in the statistics were discounted as they are estimated not to be in working condition.

(2) As the equivalent of 0.5 HP per ox.

(3) As the equivalent of 0.8 HP per buffalo.

(4) As the equivalent of 0.8 HP per horse.

(5) The average power of tractors is taken to be 25 HP. It is estimated that with the increase of less powerful tractors by 1967, average power per tractor will fall from 25 to 23 HP.

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(1) On the basis of the scattered and fragmented state of holdings.

(2) On the assumption that the acreage of agricultural land will remain constant and that output will increase by 20 per cent.

(g) to apply a program for gradually reducing the number of goats and for providing concurrently new occupations for goat owners and their families. The possibility of instituting a progressive tax on goats in excess of a given number is being considered;

(h) to raise exports of live animals or meat;

(i) to consider the possibility of concentrating the purchases of the Meat and Fish Organization on regions where the pressure on pasture and forest land is high;

(2) The need to combine vegetable production with animal production.

The measures indicated under (1) above msut be complemented by measures to encourage holdings to carry out livestock farming in conjunction with fodder production. Thus, it will be possible, by including fodder plants in crop rotation, to meet a part of feed requirements. This may also lead to the greater use of commercial feed. The development of grass farming is restricted by problems of organization and by the difficulty of establishing this from of farming. Because of the pressure created by the high rate of increase of the population, priority has to be given to the production of vegetable foodcrops. The reason for this is that, at the present level of productivity, it is possible to feed larger numbers of people by raising crops rather than livestock on a given acreage. The policy followed in regard to nutrition, and a rise in incomes should, however, contribute, together with improved productivity, to the development of forage cultures. By combining vegetable production -on a proper rotation basis- with animal husbandry, it will be possible to increase output in both sectors to a certain degree. Therefore the policy to be adopted is to encourage fodder production in livestock breeding areas, and, conversely, animal husbandry in holdings based on crop culture. The setting-up of animal husbandry farms, managed on technical lines, will also be encouraged in regions where conditions are suitable.

(3) The measures set out in paragraphs (1) and (2) above will be accompanied by measures to control animal diseases and improve domestic breeds. It is considered that an improvement in breeds, and consequently in yields, during the plan period, can only be carried out on half the present number of existing livestock.

It is intended to give the people information on parasitic diseases and enrol them in the fight against these diseases so as to secure increased yields in the plan period.

(4) The development of processing industries in the field of animal and dairy products will also promote the shift from extensive pasture husbandry to intensive livestock breeding. It is expected that the development of dairy farming will be accompanied by an increase of 50 per cent in the output of dairy industries. It is known that processing, transport and marketing difficulties create production surpluses in some regions today and at the same time contribute to keeping production below its potential level.

FORESTRY

(1) The three main objectives of forestry policy are the following :

(a) to protect and conserve forest;

(b) to restore and improve degraded forests thus raising the quality and yields of existing forests and to manage forests efficiently;

(c) to plant new forest areas so as to provide for the natural and ecological balance of watersheds.

(2) In the realization of these objectives, importance will be attached primarily to productive forest. A rational forest management policy adapted to the yield capacity of forest will thus be followed. Major problems will be dealt with on the following lines :

(a) The measures to be taken to protect forests, primarily high-yielding forests, will be planned in a fifteen-year perspective. The Forestry Directorate, the State Hydraulic Works (D.S.I.) and the Directorate for Soil Conservation and Farm Irrigation (Topraksu) will cooperate in reafforestation activities and in the preservation of forest lands.

(b) Productive forests will be developed, starting with areas of scarce settlement. To this end, it is intended to complete as soon as possible the construction of forest road networks, which are inadequate in relation to the forest area they serve. Plans, which comply with the requirements of modern forestry management, will be prepared. In this way the output of forestry products will be raised and local manpower will be employed on the construction of forest roads and in the operations connected with production and transport. It is also intended to raise the value of forestry products. A great part of forestry investment will be devoted to the above programs.

(c) In regions where soil and climatic conditions are favorable, it is intended to grow extensive plantations of fast-growing species. In this connection, importance will be given in particular to row plantations which protect agricultural lands from wind. The planting of these in private holdings will be encouraged,

(d) The measures to be taken to promote the development of forest are the following :

(i) to complete within a short time, forest cadastral surveys and management plans;

(ii) to apply a more efficient program of forest conservation, in particular where fire control and the prevention of uncontrolled cuttings is concerned;

(iii) to complete forest roads in a short time so as to make all parts of forests accessible to exploitation;

(iv) to improve pastures within forests and reduce (as mentioned in the section on livestock) the number of black forest goats which cause damage to forests. As an experiment in harmonizing the relationship between forests and forest villages, the re-settlement of forest populations in other regions will be started in the plan period. The setting-up of cooperatives in this connection will be encouraged. According to the results obtained from these trials, the work of rural development will be pursued.

(v) to reduce the size of the forestry districts covered by Forest Enterprises, which are at present too large for rational management, and to train sufficient numbers of technical and auxiliary personnel.
The workers engaged in wood production and loading activities will be given proper training;

(vi) to standardize forestry products according to the requirements of internal and external markets, and modernize production and loading methods;

(vii) to seek to close the gap between the insufficient supply of and the demand for firewood from alternative sources of fuel and by preventing wastage of firewood;

(viii) to extend, with a view to preventing their devastation, the provisions of the special Forest Law to the vallonia oak forests (a traditional source of export products) which are unsuitable for agriculture and to stone pine forests.

FISHERIES

The policy in this regard is to reorganize the exploitation of fish resources on modern lines. Fisheries legislation dates back to 1879 and contains unduly protective provisions. The following measures are contemplated as part of the fisheries policy to be applied :

a. replacing the old legislation by a law on water products designed to promote efficient fishing methods;

b. reorganizing and consolidating the government services concerned with fisheries;

c. speeding up research in fisheries;

d. providing fishermen with credit facilities at the proper time through the Agricultural Bank, instituting insurance policies for fishing boats and equipment, and accepting these as security;

e. exploring the possibilities for the organization of training in connection with fishing;

f. encouraging the setting-up of fishing cooperatives, in particular at the village level, to replace enterprises based on fishing concessions;

g. promoting fish culture;

h. setting up wholesale fish markets in production districts in order to ensure the concentration of sales and catches;

i. endeavoring to standardize fishing motorboats and equipment;

j. simplifying export procedures and standardizing the presentation of exports;

k. importing packaging material and, if necessary, raw materials for processing into fish products or canned fish with a view to exporting the latter on a regular basis;

l. taking measures for the greater security of fishermen's lives and goods;

m. building shelters for fishing boats in coastal areas.

n. enacting a law which will extend territorial waters to six miles from land and fishing water to twelve miles.

INSTITUTIONAL REFORMS

ADMINISTRATIVE ORGANIZATION

a. The statistics which serve as a basis for the framing of agricultural policy will be improved.

In order to ensure that the information needed for planning is available, the collection and classification of agricultural statistics will be reorganized. In addition to the data furnished by agricultural censuses, information will be sought with regard to the following items : agricultural output, quantities marketed, stock estimates, prices received and prices paid by agricultural producers, farm incomes (including those of landlords, sharecroppers, tenant farmers and livestock breeders), out-standing debts of farmers. In obtaining this information, besides the usual statistical data, use will be made of questionnaires based on sample methods, cadastral surveys and studies on the budgets of farming families, and on agricultural credits. Considering that adjusments will have to be made in the plan, administrative measures will be taken to make it possible to obtain in a short time the statistical data required. Research on agricultural economics will be organized by the Ministry of Agriculture in liaison with the Institute of Statistics.

b. Administrative Reform

After the services to be performed by the State in the agricultural sector have been determined, the organization responsible for carrying out these services will be set up. This organization will be responsible for promoting the development of soil and water resources, of vegetable and animal production and for ensuring the more efficient control of plant and animal diseases.

Besides administrative reform, measures will be taken to ensure that the technical personnel is effectively engaged in productive work, and that advisory workers are not employed in an administrative capacity.

In the agricultural services performed by agencies which are not attached to the Ministry of Agriculture, care will be taken to ensure the conformity of these services with the objectives of agricultural policy.

IMPROVEMENT OF AGRICULTURAL SERVICES

a. Agricultural Extension

In order to attain the agricultural objectives of the plan, extension services must be enlarged and made more efficient. In planning investments, provision has been made for meeting the estimated increase in vehicle requirements arising from the enlargement of services. It is estimated that extension activities will require a staff of 7,700 trained workers (1) as against the existing number of about 4,400 (2). However, the effective number is in reality lower than 4,400, as these agents particularly those who work in the field of crop production, are also engaged in activities outside extension. Extension services will contribute to a large extent to the attainment of the plan objectives and must therefore be intensified and improved.

b. Agricultural Training

Intensifying extension services and other agricultural services will not be possible merely by making better use of existing personnel. The training program of the Ministry of Agriculture will have to be revised to include training courses for technical staff at high and medium levels. Provision has been in the investment program for the opening of new training schools.

c. Agricultural Research

Research will be carried out on the technical factors determining the relationship between inputs and yields, and practical conclusions will be drawn from these studies. The studies undertaken in order to determine the situation of land use in Turkey, namely the acreage of agricultural, pasture and forest land, will be accelerated and efforts will be made to ensure that land is used according to its classification.

AGRICULTURAL CREDIT

In order to attain the agricultural targets set in the plan, the activities of agricultural producers must be directed toward these targets. Agricultural credit will be an effective means of orienting agricultural activities and encouraging investments in structural and farm improvements. At the same time, agricultural credits will serve to encourage the wider use of inputs which help to raise productivity.

It is intended to start supervising credits to ensure that they are used for the purpose for which they were granted. Measures will be taken to ensure that fertilizers and quality seeds, in particular, are granted in kind.

A distinction will be made in practice between credits of an operational nature and those that are for investments. In conformity with the targets, medium-term credits for investment are to be raised; in granting these credits, care will be taken to see that they are directed towards the fields of. investment stressed in the plan. Operational credits will be given in the season in which they are required by producers and repaid in the period of sale of the produce. The matter of security will be reviewed with a view to obtaining the best possible returns from credits.

The Agricultural Bank will determine, in cooperation with the Ministry of Agrictulture, the fields in which credits will be assigned, the extent of credit requirements, the areas to which credits will be granted, and it will also supervise the use of these credits. The allocation, in conformity with the provisions of Law No. 2836, of 1 per cent of the budget to the Agricultural Bank for addition to its capital, will be continued in the plan period.

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(1) Excluding technicians but including extension officers in plant and animal production and forestry.

(2) Advising on plant and animal production and forestry.

The Agricultural Credit Cooperative set up under Law No. 2836 to give credit to farmers will be authorized to accept deposits in order to channel agricultural savings to agricultural fields.

MARKETING

a. The development of cooperatives, set up as joint marketing and credit organizations, will be encouraged.

b. Measures will be taken to encourage the private sector to set up marketing facilities in appropriate places chosen with regard to their distance from production centres and markets. If need be, these facilities will be set up by the State.

c. Roads and transportation between centers of production and markets should be developed. To this end, account will be taken of the studies to be undertaken on the marketing situation of the different products in connection with the preparation of village and provincial road programs.

d. Starting with exports products, standards will be prepared by the Turkish Standards Institute. The Ministries of Commerce and Agriculture will inspect delievries to see that they comply with the agreed standards. The cost of standardization, however, must not be such as to exceed the benefit which will accrue from its application.

FARMERS ORGANIZATION

a. Cooperatives

The setting-up of cooperatives is recognized to be generally beneficial for agriculture. Studies will be made to determine whether there exist reasons which prevent farmers from setting-up cooperatives. Small and medium farmers, in particular, will be encouraged to form cooperatives so that they may benefit from the advantages enjoyed by large holdings with regard to production and marketing.

b. Agricultural producers will be encouraged to form associations. Chambers of agriculture will be set up, at first gradually and in certain districts, if it is not thought feasible to establish them in all parts of the country at once.

c. It is considered that organizing farmers within the framework of community development will also help to promote higher production. This subject is considered in more detail in the section on Community Development.

MEASURES TO STIMULATE PRODUCTION

a. Land Reform

(1) Distribution of Ownership

(a) Size of Holdings

In determining the size of minimum holdings and ceilings for maximum holdings, the following considerations will be kept in mind : the reduction of excessive income disparities; the minimum level of income necessary for the subsistence of a family; the degree to which land consolidation can be carried out; the possibilities for increasing the productivity of large and small holdings and the taxation of large incomes.

(b) Land Consolidation

Though the fact that plots are scattered and fragmented helps to alleviate disguised unemployment, it is essential, in principle, that farming units should be contiguous to the extent permitted by physical conditions. Consolidation is one of the features of the agrarian reform to be carried out. In addition, importance is attached to the consolidation of holdings in areas where irrigation and soil improvement projects will be implemented and measures to this end will be taken.

(c) Rationalization of holdings

Measures will be taken to ensure that both existing holdings and those created as a result of land redistribution will be managed on economic lines and in compliance with modern exploitation techniques. Measures complementary to land reform must therefore be taken in the sphere of training and extension, to ensure the supply of means of production, to promote cooperative movements, and in relation to taxation and public works programs.

(d) Land for Redistribution

Redistribution of land will concern, beside the lands owned or administered by the State, that part of private land which is in excess of the maximum limits to be set and which will be expropriated.

(2) Regulating Share-Cropping and Tenancy Conditions

(a) Share-cropping and tenancy rights will be based on precise contracts. Standard types of contracts will be prepared in which the rights of sharecroppers and tenants are protected.

(b) The amount of the lease, the share of croppers and the conditions of payment will be determined with reference to specific conditions.

(c) Production and investment outlays will be shared according to certain regulations.

b. Price policy

(1) The price policy to be followed will aim at stimulating productivity in certain fields and will be used as a means of influencing the redistribution of income. The main principle will be to support input prices and to ensure that farmers pay low prices for feedstuffs, fertilizers and improved seeds.

(2) In view of the inflationary effect of a general upward tendency in prices, it was considered essential that no price increases should be initiated in products whose prices are officially fixed.

In determining the prices of agricultural products, the relative prices of these products will also be carefully examined.

(3) Price stability : This depends on credit and marketing facilities and on general conditions. The fact that agricultural producers contcract debts with merchants or middlemen, or do not dispose of sufficient storage space, means that a large part of the crop will be sold at the time when it is most abundant, thereby creating marked price differences. The effect of credit and marketing facilities on prices is an added reason for improving these systems.

The stabilizing effect on prices of the existence of national foodstuff stocks has also been considered. The difficulty in this respect is to build up sufficient stocks in the initial period. The possibilities of making use in this connection of U. S. agricultural surplus goods will be fully explored.

As a means of preventing price fluctuations, consideration should also be given to setting up warehouses (from which purchases may be made) in small centers rather than large silos in the main consumption centers. This function can also be assigned to cooperatives. Encouragement will be given in particular to farmers' organizations in the field of such perishable products as fresh fruit and vegetables, and milk, with the object of stabilizing producer prices.

MINING AND QUARRYING

EXTRACTION OF COAL AND MINERALS

BASIC PRINCIPLES AND METHODS

a. The basic principles to be applied in the fields of mining are:

(1) to conserve national wealth, that is, to exploit newly-discovered ground and underground resources economically and in accordance with modern techniques;

(2) to process in Turkey as much as possible of the minerals extracted and thus increase their value.

b. As mining is largely governed by exports, output has shown considerable fluctuations in the 1950 - 1960 period. It was accordingly not possible to make demand and production projections based on recent trends. Demand projections were based on the demand of the sectors using minerals, and on exports, and were revised in the light of estimated mineral reserves.

PRESENT SITUATION

a. Although mineral prospecting in Turkey is free to all real and juridical persons, it has remained mainly within the sphere of the activities of the Mining Research and Prospecting Institute. Despite the work carried out so far, the exploration for mineral deposits in the country has not yet been completed.

b. Minerals are exploited by both the State and private enterprise.

The public sector accounts for 75 per cent of production.

c. 29 different minerals are at present being extracted in Turkey. Data concerning 18 of the more important minerals is given in Table 70.

TABLE 70 — Mining Reserves and Mineral Production, 1961

Minerals	Estimate of Reserves Known Rate of purity %	Weight ('000 Tons)	Production Weight ('000 Tons)	Value (Million TL.)
Hard coal		1 500 000	3 771.0	437.7
Lignite		847 000	2 609.0	90.8
Iron		85 000	840.0	58.8
Chrome		60 000	400.0	102.0
Copper	2	20 000	723.0	13.3
Lead	7	300	6.0	1.4
Zinc			4.0	1.4
Manganese			40.0	9.7
Mercury			0.08	3.5
Antimony			2.5	4.0
Emery			8.5	0.8
Sulphur			31.0	1.5
Boracite		150 000	55.0	17.1
Barytes			—	—
Asbestos			7.5	5.7
Magnesite			1.0	0.2
Meerschaum			0.1	3.3
Pyrites	2	8 700	116.0	11.0

PRODUCTION TARGETS

The aim is to exploit mineral resources in the way most beneficial to the national interest, to meet internal requirements and to export as much as can be marketed abroad.

The production figures given in Table 71 have been drawn up on the basis of the estimated demand for Turkish minerals. The value of this production is given in Table 72. Total mineral requirements will be met from internal sources. The domestic metallurgical industry was set up to process only domestic ores.

TABLE 71 — Production Projections

('000 Tons)

Minerals	1963	1967
Hard coal	4 175.0	4 700.0
Lignite	3 800.0	5 900.0
Iron	950.0	2 000.0
Copper	25.0	25.0
Boracite	65.0	75.0
Sulphur	30.0	30.0
Pyrites	110.0	210.0
Chrome	450.0	550.0
Wolfram	—	36.0
Mercury	0.09	0.114
Lead	12.5	15.0
Meerschaum	0.135	0.253
Phosphorite	—	704.0
Potassium mineral	—	80.0
Manganese	50.0	85.0
Antimony	1.5	3.5
Emery	9.0	12.0
Mineral water (litres)	9 500.0	12 500.0

TABLE 72 — Value of Production

(Million TL.)

Minerals	1962	1963	1967	1967 Index (1962=100)
Hard coal	406.3	438.4	495.6	122
Lignite	105.0	132.0	205.5	196
Iron	60.0	66.5	133.0	222
Copper	195.0	195.0	195.0	100
Boracite	18.1	18.1	20.9	116
Sulphur	1.5	1.5	1.5	100
Pyrites	11.0	11.0	25.0	228
Chrome	108.0	121.5	148.5	138
Wolfram	—	—	39.9	360
Mercury	3.1	3.4	4.3	139
Lead	3.2	3.4	4.1	128
Marble	1.8	2.0	16.2	900
Meerschaum	3.0	5.0	9.4	313
Manganese	5.6	6.8	13.5	241
Zinc	2.9	4.7	7.0	241
Antimony	4.0	4.0	5.6	140
Emery	0.8	0.9	1.2	150
Mineral water	4.5	5.2	6.9	153
TOTAL VALUE	**933.8**	**1 019.4**	**1 333.1**	**143**

INVESTMENTS

a. Exploration and Development Investment : 280 million TL. must be invested in high priority prospecting for petroleum, iron, copper, chrome, aluminium, potassium phosphate and uranium, and in preparing geological maps.

b. Maintenance Investment : regular mining investments are necessary to maintain the capacity of underground installations. Total maintenance investments in the five-year period amount to 712 million TL.

c. Continuing Investment : the wolfram mining installations which were begun in 1962 at Uludağ are the only continuing investments which are not yet in operation.

d. New investment : new mining investments of 549.4 million TL. are planned. They concern mainly :

New iron ore deposits

Chrome ore processing installations

Aluminium operations

If studies give positive results, work on aluminium will begin.

e. Investments in the mining sector in the 1963 - 1967 period will amount to 1,512.4 million TL., of which 1,350 million will be in the public sector.

EFFECT ON FOREIGN TRADE

a. Imports

As Turkey's total mineral requirements are met internally, there are no imports. The import component of investment is shown in Table 73.

TABLE — Mining Investment

(Million TL.)

Type of Investment	In foreign currency	Total	Amount Spent up to 1963		1963		1964		1965		1966		1967	
			In f.c.	Total	In f.c.	Total	In f.c.	Total	In f.c.	Total	In f.c.	Total	In f.c.	Total
Exploration	38.0	277.0	—	—	5.0	40.0	10.0	45.0	7.0	55.0	8.0	65.0	8.0	72.0
Maintanance	108.0	710.0	—	—	51.0	111.0	16.0	138.0	17.0	134.0	31.0	225.0	3.0	102.0
Continunig	22.5	55.0	—	2.0	2.0	5.0	5.0	10.0	7.0	10.0	8.5	18.0	—	10.0
New	264.1	472.6	—	—	31.5	59.5	85.6	114.6	91.0	162.5	36.0	103.0	20.0	33.0
TOTAL	**432.6**	**1 514.6**	**—**	**2.0**	**89.5**	**215.5**	**116.6**	**307.6**	**122.0**	**361.5**	**83.5**	**411.0**	**31.0**	**217.0**

b. Exports

Exports consist of those minerals which can be sold on world markets. Assuming normal conditions, exports in the 1963 - 67 period are expected to bring in 1,460 million TL. (See Table 74)

TABLE 74 — Mineral Exports **(Thousand tons - thousand $)**

Mineral Exports	**1962**		**1963**		**1967**	
	Weight	**Value**	**Weigth**	**Value**	**Weight**	**Value**
Iron	200	1 800	150	1 350	100	900
Chrome	400	12 000	450	13 500	500	16 500
Copper	14	9 240	14	9 240	10	6 600
Lead	12	360	12.5	375	15	450
Manganese	25	750	25	750	50	1 500
Mercury	0.050	275	0.068	376	0.087	476
Antimony	2.5	350	2.5	350	3.5	490
Pyrites	95	2 950	90	2 950	—	—
Wolfram	—	—	—	—	3.6	4 428
Boracite	65	2 015	65	2 010	75	2 320
Marble	3	135	5	225	40	1 800
Lead - Zinc	12	360	12.5	375	15.0	450
Meerschaum		50		65		126
TOTAL (in thousand of $)		30 285		31 566		31 040
TOTAL (in thousand of TL.)		272 565		284 094		324 360

VALUE ADDED

The cost of inputs is not great in mining. Therefore the value added by mining operatisons can be considered to be equal to the value of production. Production value are given in **Table 72.**

MEASURES

a. Mining legislation will be revised to ensure that mineral resources are not wasted, that there are no inequalities in the profits derived from various mining operations, and that mining activities are stimulated.

The new mining law will be based on the following principles :

(1) Persons exploiting underground resources will enjoy a legally recognized right to these resources.

(2) Turkey will be divided into mining regions, and mining rights will be registered according to regions, as clearly as in the case of land registration.

(3) Unnecessary charges and formalities will be abolished.

(4) The provisions of non-mining laws which have a restrictive effect on mining will be repealed.

(5) The provisions of the mining law may be applied to the mines to which the regulations concerning stone quarries presently apply and which are large-scale enterprises, if a demand to this effect is made.

(6) Systematic and technical exploitation must be ensured.

(7) The work of government departments concerned with mining must be coordinated.

b. The regulations concerning stone quarries must be revised to conform to modern conceptions.

c. The possibilities for exporting boron minerals in refined form must be investigated.

d. The Mining Department will be reorganized as follows :

(1) It will be strengthened so that it can apply the mining law;

(2) It will set forth technical methods to be followed in mining, and will see to it that regulations for the safety of miners are enforced;

(3) It will provide technical assistance for mining entrepreneurs;

(4) It will open branches as needed to make its services more easily available;

(5) It will prepare mining projects for newly found minerals and will make profitability surveys. Only those mines will be exploited which can be worked economically.

(6) It will provide for the immediate explotation of mineral reserves which can be profitably worked.

e. Geological studies and investigations

The efficient exploitation of mining resources must be based on a comprehensive assessment of reserves. The mineral resources existing in Turkey must be more fully ascertained.

The Mining Reseach and Prospecting Institute is the only establishment engaged in reliable mineral prospecting. While extending the activities of this Institute, steps must be taken at the same time to encourage prospecting on the part of both State and private mining enterprises.

A geological map prepared on a scale of 1/800,000 has been published by the Mining Research and Prospecting Institute. Priority will be given to the preparation of precise and useful maps.

f. Assistance to Mining Enterprises

The laboratories of the Mining Research and Prospecting Institute will be provided with the necessary equipment and means to carry out, rapidly and conclusively, mineralogical and chemical analyses, ore production tests and industrial studies.

g. The Ministries of Agriculture and Public Works will inform the Ministry of Commerce and the Petroleum Department of the mineral elements found in the soil analyses conducted by their laboratories.

h. The Ministries of Public Works and of Reconstruction and Settlement will conduct their geological surveys in cooperation with the Mining Research and Prospecting Institute.

i. The delimitation of military zones will be reviewed.

j. The 1/25,000 scale maps of areas outside military zones will be made available to enterprises which are interested.

k. The results of the exploration work done by the Mining Research and Prospecting Institute will be made available to mining enterprises in return for a fee.

1. Entrepreneurs who wish to exploit mineral deposits discovered by the Mining Research and Prospecting Institute will be able to acquire the mining rights thereof for a fee to be fixed by the Mining Department, and provided that objective standards which rule out the possibility of arbitrary choice have been determined in this connection.

PETROLEUM INDUSTRY

BASIC PRINCIPLES AND METHODS

The main objectives are to raise petroleum demand to a level consistent with the energy policy pursued, and to ensure that requirements are met from internal sources. Demand forecasts for this sector were made on the basis of past trends, taking into account requirements in the energy, transport and chemical sectors.

PRESENT SITUATION

a. Petroleum prospecting is being vigorously pursued in Turkey. The results obtained so far hold out promise for the future. Prospecting is carried out by the Turkish Petroleum Corporation (Türkiye Petrolleri A. O.) in which the State has a share, and by foreign private companies. An important part of the positive results obtained is due to the Petroleum Corporation.

b. The consumption of petroleum products and the capacity of refineries in 1961 are shown in Table 75.

TABLE 75 — Situation of the Petroleum Industry **('000 tons)**

		Refining capacity		
	Consumption	Batman	İzmit (1)	Mersin (1-2)
Crude petroleum	—	580.0	1 000	3 200
Gasoline	467.9	84.0	262	528
Kerosene	364.4	9.5	100	289
Diesel oil	648.4	59.0	208	823
Fuel oil	250.0	290.0	373	1 104
L. P. G.	—	—	20	—

(1) Capacity is given on the basis of diesel oil i.e. diesel oil production determines the output of the other fraction. The İzmit and Mersin plants have some flexibility.

(2) The Mersin Refinery started to operate in 1962.

The distribution of petroleum products is being handled by both public and private sector organizations, and there is keen competition between the two.

c. The work of organizations which contribute to the rapid development and to raising the value, of national petroleum resources will be facilitated.

DEMAND FORECASTS

The demand forecasts, shown in Table 76, are based on past trends and on the assumption that there will be a more balanced development in transport systems, and that the number of motor vehicles will not change greatly.

TABLE 76 — Demand for Petroleum Products **('000 tons)**

–	1962	1963	1967	1967 Index (1962=100)
Gasoline	500.0	515.7	742.5	148.5
Diesel oil	713.2	784.5	1 148.6	161.0
Kerosene	393.3	424.7	623.9	158.6
Fuel oil	330.0	500.0	1 970.0	597.0

The demand for fuel oil is calculated with regard to a general energy balance. Fuel oil is still a very new fue lin Turkey. Taking into account conditions in foreign countries, it is estimated that the demand for fuel oil will increase rapidly in the future.

PRODUCTION TARGETS

With the object of making suitable use of existing refineries and reducing imports of refined products, the physical capacity of refineries has been adjusted to the optimum production of diesel oil.

TABLE 77 — Production of Petroleum Products **('000 tons)**

	1962	1963	1967
Crude oil for refining	3 314.8	3 630.4	4 780.0
Gasoline	635.4	683.3	874.5
Diesel oil	713.4	784.5	1 090.0
Kerosene	272.8	294.0	398.5
Fuel oil	1 399.7	1 533.1	2 067.0

Owing to the limited crude oil refining capacity of refineries the production of diesel oil in 1967 will not cover demand.

INVESTMENTS

Investment in the petroleum industry is shown on Table 78. The government's share of investment expenditures is estimated at 1.4 billion TL.

TABLE 78 - 79 — Investment in the petroleum industry (Million T.L.)

Investment	1963 In foreign currency	1963 Total	1964 In f.c.	1964 Total	1965 In f.c.	1965 Total	1966 In f.c.	1966 Total	1967 In f.c.	1967 Total	1963 - 1967 Total In f.c.	1963 - 1967 Total Total
Budget expenditures ...	7.5	10.0	10.0	12.5	12.5	15.0	15.0	17.6	17.6	20.0	62.6	75.1
Exploratory drilling ...	15.0	53.3	15.3	53.3	15.5	53.3	11.6	40.0	11.6	40.0	69.0	239.9
Development drilling ...	45.0	83.0	45.0	83.0	45.0	84.0	35.0	62.5	35.0	62.5	205.0	375.0
Transport	—	—	99.8	182.8	100.8	184.8	99.8	182.8	—	—	300.4	550.4
Distribution	25.0	96.0	25.0	96.0	25.0	96.0	25.0	96.0	25.0	96.0	125.0	480.0
T O T A L	**92.5**	**242.3**	**195.4**	**427.6**	**198.8**	**433.1**	**186.4**	**398.9**	**89.2**	**218.5**	**762.0**	**1 720.4**

EFFECT ON FOREIGN TRADE

a. Imports

(1) Import components of investment goods are show in Table 78.

(2) As the refineries are adjusted to the production of diesel oil, imports of kerosene, and, in 1967, of diesel oil, will have to take place.

TABLE 80 — Imports of Refined Products (Million TL.)

	1963	1964	1965	1966	1967
Kerosene	38.8	40.6	42.6	62.5	66.9
Diesel oil	—	—	—	—	29.5
TOTAL	**38.8**	**40.6**	**42.6**	**62.5**	**96.4**

(3) Imports of crude oil will be continued until sufficient petroleum has been discovered in Turkey.

TABLE 80 — Imports of Refined Products (Million TL.)

	1963	1964	1965	1966	1967
Crude petroleum	439.3	483.5	531.9	585.1	604.8

b. Exports

The gasoline production of refineries which is in excess of consumption needs will be exported.

TABLE 82 — Exports of Refined Products (Million TL.)

	1963	1964	1965	1966	1967
Gasoline	23.5	24.7	26.1	27.9	22.5

TABLE 83 — Value Added (Million TL.)

Years	Value of Production	Inputs	Value added	Index
1962	1 407.6	629.8	777.8	100
1963	1 564.5	689.6	874.9	111
1967	2 244.3	908.2	1 336.1	172

MEASURES

a. The functions to be performed by the State in regulating and controlling the activities of the petroleum sector devolve on the Ministries of Industry and Commerce.

In order to eliminate this confusion which entails loss of time, responsibility in this field is to be assumed by a single authority.

b. In a field where both the public and the private sector engage in operational and marketing activities, all enterprises will enjoy the same conditions and equal opportunities.

c. The Turkish Petroleum Corporation (Türkiye Petrolleri A. O.) will also be empowered to take decisions and conclude operations. On the principle that responsibility for the chain of operations extending from research to retail sales should be unified, the control of distribution and sales activities, in the case of State-produced petroleum, should be merged with control over exploration, exploitation and refining. The Petroleum Office (Petrol Ofisi) will be given the task of marketing the products of the refineries owned wholly or partly by the State and the Turkish Petroleum Corporation will be the responsible administrative authority.

d. Adjustments in the prices of the different petroleum products should ensure that :

(1) Imports of intermediate goods will be unnecessary, as petroleum refineries complete the whole process of gasoline production;

(2) the activities of searching for and finding oil are accelerated and that the refining of indigenous oil is made more attractive;

(3) the prices of petroleum products are brought to the level of international prices;

(4) the price of high grade gasoline is raised above that of other grades;

(5) the revenue yield of this sector to the Treasury is raised to the necessary level and is consistent with that prevailing in other countries.

MANUFACTURING INDUSTRY

Principles and targets for development of the manufacturing industry

INTRODUCTION

The realization of a 7 per cent rate of growth depends to a large degree on the development that can take place in the manufacturing industry. For reasons outlined earlier, it was estimated that the average yearly rate of growth in the agricultural sector would not exceed 4.2 per cent. In industry, on the other hand, the yearly average rate of growth will be 12.9 per cent.

BASIC PRINCIPLES

a. It is not the aim to manufacture every kind of product in the country;

b. In order to raise national income and living standards, production will be developed in fields where comparative cost analyses appear to give favorable results.

c. It was considered that in fields where there is excess capacity it might the economic to use this excess capacity when the marginal production cost resulting from the use of this capacity compares favourably with international prices.

d. The necessary organization measures have been defined and will be applied to ensure that excess capacity is used and that further excess capacity is not created.

e. By affording protection to certain newly set-up industries during a specified period of adjustment or for an initial period related to the level of demand, it is considered that these industries may attain cost levels comparable to international costs.

f. It is thought that the measures to be taken protect industry, and the rates of protection that will be applied in the framework of the policy of imports will be determined in conformity with development targets, and that administrative and legal provisions which favor imported products at the expense of internal production will be eliminated.

g. Imports of goods, for which internal production is satisfactory with regard to both quantity and quality, will be controlled in conformity with protection goals or will be totally prohibited.

h. Importation of competitive goods will be allowed after a suitable period of delay in order to prevent the prices of home-produced commodities from greatly exceeding world prices and to accustom domestic industry to international competition.

i. Measures will be taken prevent price disturbances due to monopolistic situations and the concentration of excessive profits a few hands.

ENCOURAGEMENT OF INDUSTRY

The following measures will be taken to encourage industry :

a. Industrial locotions will be selected with a view to increasing total productivity and promoting a balanced interregional development.

b. Various types of industrial credits will be increased. In the granting of credit to industries, special consideration will be given to those which manufacture or will manufacture articles whose production is considered necessary or desirable in the plan.

c. Accelerated depreciation will be applied in industry.

d. In order that industries which have started on the basis of assembly may pass to the process of complete manufacture, the application of the production tax will be revised and encouragement will be given to raising the percentage of domestically produced components.

e. The Center for the Promotion of Exports will undertake export studies and the exportation of industrial products will be facilitated.

f. Exports will be encouraged by the refund of the customs duties and fees on the imported raw and auxiliary materials used in the manufacture of industrial export products, by rebates on the production tax and by similar measures.

g. Consideration will be given to measures which will make it possible to obtain the domestic raw materials entering in export products at international prices and thus lower the cost of export products.

QUALITY CONTROL AND STANDARDIZATION

a. The quality of products will be controlled and the sale of those that do not conform to a specific quality and standard will not be allowed. The manufacturer will be required to give guarantees in cases where this is obligatory.

b. The standardization of industrial products will be accelerated.

PERSONNEL

a. In order to increase the competence of administrative and other personnel, vocational training at all levels will be ensured and the necessary arrangements made for personnel to gain advanced education and specialization.

b. More responsibilities and scope for initiaive will be given to personnel.

c. The wage and salary policy and the system of bonuses will' be resived to offer more incentives.

PRODUCTION PROJECTIONS

Table 84 gives the total value of production in each branch of manufacturing in the plan period.

TABLE 84 — Value of Production in Manufacturing Industry (Million TL.)

Main Groups	1962	1963	1967 1962=100	1967 Index
Food, beverage, tobacco	7 517.7	8 470.6	11 241.6	150
Textiles and clothing	5 270.0	5 640.0	7 380.0	140
Wood and cork products	43.8	55.6	121.5	277
Paper	101.1	120.6	145.6	144
Rubber	181.5	400.7	786.3	433
Chemicals	1 130.0	1 310.0	2 364.0	209
Non-metallic products	488.6	559.9	711.5	146
Basic metal industry	1 128.3	1 236.3	2 229.9	169
Metallic products	943.0	1 236.3	1 347.0	143
Machinery (excluding hand tools)	327.0	715.2	1 994.4	610
Electrical machinery	189.6	251.9	519.8	275
Transport equipment	215.0	342.1	1 184.2	551
Other industries (plastic industry)	240.0	260.0	810.0	338
TOTAL	**17 775.6**	**20 487.9**	**30 835.8**	**172**

VALUE ADDED

Table 85 shows the value added in each branch of manufacturing industry and the share of manufacturing industry in GNP. While the value added by the manufacturing industry in 1962 amounted to 12.8 per cent of GNP, it will rise to 13.5 per cent in 1963 and is estimated to reach 16.7 per cent in 1967.

TABLE 85 — Value Added in Manufacturing Industry

Main industrial branches	Value Added (Million TL.)			As per cent of total value added in industry		
	1962	1963	1967	1962	1963	1967
Food, beverage, tobacco ...	2 301.5	2 461.2	3 217.8	34.2	32.4	26.1
Textiles and clothing	2 110.0	2 260.0	2 950.0	31.4	29.6	23.9
Wood and cork products ...	15.0	27.4	42.1	0.2	0.4	0.3
Paper	76.1	92.4	125.4	1.1	1.2	1.0
Rubber	85.6	189.0	370.9	1.3	2.5	3.0
Chemicals	365.0	428.0	864.0	5.4	5.6	7.0
Non-metallic products	269.8	308.1	490.0	3.6	3.7	3.5
Basic metal industry	616.7	653.4	1 174.3	9.2	8.6	9.4
Metallic products	476.0	517.0	695.0	7.2	7.0	6.2
Machinery (excluding hand tools)	153.7	312.9	985.9	2.3	3.7	7.7
Electrical machinery	61.4	86.1	260.4	0.9	1.1	2.1
Transport equipment	96.8	192.8	768.1	1.4	2.5	6.2
Other industries (plastic indusry)	121.0	143.0	445.5	1.8	1.9	3.6
TOTAL	**6 748.1**	**7 671.3**	**12 389.4**	**100.0**	**100.0**	**100.0**
GNP	52 700	56 400	73 900			
Value Added in Manufacturing as % of GNP	12.8	13.5	17.7			

INVESTMENTS

Table 86 shows total investments in the different manufacturing branches.

TABLE 86 — Investments in Manufacturing Industry (Million TL.)

	1963	1964	1965	1966	1967	Total
Food, beverage, tobacco ...	242.9	319.4	217.4	121.1	133.5	1 034.3
Textiles and clothing	80.0	160.0	190.0	220.0	260.0	910.0
Wood and cork products ...	13.7	36.1	13.7	2.8	33.2	99.5
Paper	10.0	100.0	140.0	165.0	138.0	553.0
Rubber	46.0	83.0	91.0	22.0	12.0	254.0
Chemicals	102.0	568.0	859.0	831.0	375.0	2 735.0
Non-metallic products	118.0	96.8	68.7	3.4	17.4	304.3
Basic metal industry	1 157.1	562.0	299.7	99.0	15.0	2 132.8
Metallic products	20.0	30.0	55.0	65.0	67.5	237.5
Machinery (excluding hand tools)	191.6	180.5	160.0	100.6	435.1	1 068.4
Electrical machinery	96.0	64.0	16.0	22.0	46.0	244.0
Transport equipment	86.0	151.1	119.8	43.5	22.0	422.4
Other industries (plastic industry)	3.0	9.0	46.0	31.0	5.0	94.0
TOTAL	2 166.3	2 359.9	2 276.9	1 726.4	1.559.7	10 089.2

FOOD, BEVERAGE AND TOBACCO INDUSTRY

BASIC PRINCIPLES AND METHODS

This sector covers all the activities ranging from the processing of the various agricultural products to their marketing. Since it involves all the processes between agricultural production and final consumption, it is the most important sector in the country's industry. The data for this sector is obtained from very different sources, and is largely based on estimates and therefore difficult to verify. The information available for monopoly products such as beverages and tobacco is more detailed and sound. The information concerning large enterprises and the estimates made for small enterprises have been evaluated together.

The expenditures which will be made in accordance with the plan targets will cause a considerable rise in incomes in the coming years. To direct an important portion of this income increase to investment goods is one of the basic principles of the plan. The balance between the investments that will enable production to meet the demand for increased investment goods and the foreign exchange needed to assure imports has been provided in the plan. A large portion of this increased income will, however, create a demand for consumer goods. Therefore, the maintenance of a timely and adequate flow of consumer goods is one of the basic goals aimed at in the development plan. The most important consumer goods with respect to the plan are the "wage goods" which represent an important part of the food and clothing consumption of low income groups.

Agricultural production is the basis of the food supply. All the appropriate measures have been included in the plan in order to raise this production to a sufficient level. In Turkey, however, it is just as important to channel a larger part of agricultural production to the market as to increase the quantities produced. As is known, there is an important largely self-sufficient group in the agricultural sector, which has very loose ties with the market. Therefore, the food industry must be expanded and well organized in order to improve food diets.

On the other hand, one of the aims of the plan is to adjust production so as to develop the consumption of more varied food-stuffs and those of higher nutritional value. This aim has been kept in mind in the food sector program. Production of food under better conditions has also been taken into account in the various branches of this sector. The population's consumption habits, the relationship between the demand for various goods and income increases and substitution possibilities have been taken into account in the estimates relating to this sector. The principle of making full use of existing production capacities has been followed in this sector as in all other sectors.

MEAT AND MEAT PRODUCTS INDUSTRY

BASIC PRINCIPLES AND METHODS

Although Turkey has a high animal population, meat consumption is rather low. Among the various reasons for this is the insufficiency and inadequate functioning of processing and marketing facilities. The measures to be taken in this connection will aim, by ensuring that meat producers receive a larger share of consumer prices for meat, at encouraging animal husbandry, improving the quality of meat and channelling a greater part of production to domestic and foreign markets.

PRESENT SITUATION

Turkey's annual meat production is estimated to be 460,000 tons. 20.0000 tons (4 per cent) of this is provided by the Meat and Fish Organization (Et ve Balık Kurumu) and about 150 thousand tons (33 per cent) by slaughterings in slaughter houses. 63 per cent of total production is thus slaughtered outside of slaughter houses and consequently a sizeable portion of the carcasses are lost. It is not possible to obtain data for meat consumption.

Annual sausage (sucuk) production is 4,600 tons. It is estimated that 1,600 tons of this are produced in households and the remaining 3,000 tons in factories. Annual production of pastırma (dried meat preparation) is thought to be 3,600 tons and of salami-sausage about 410 tons.

Per capita annual consumption of meat is 15 Kg., of sausage 160 gr. and of pastırma 130 gr.

DEMAND ESTIMATES

Demand estimates for meat and meat products are given in Table 87.

TABLE 87 — Demand Projections

			1962	1963	1967
Meat	Per capita	Kg.	15.7	17.9	19.7
	Total	tons	462 000	542 657	666 053
Sausage	Per capita	Kg.	0.156	0.160	0.188
	Total	tons	4 600	4 850	6 345
Pastirma	Per capita	Kg.	0.122	0.131	0.154
	Total	tons	3 600	3 970	5 191
Salami	Per capita	Kg.	0.014	0.014	0.017
	Total	tons	410	440	570

PRODUCTION TARGETS

Total production is taken to be equal to domestic consumption. The production of the Meat and Fish Organization and of slaughter-houses is shown separately in Table 88. The share of the production of the Meat and Fish Organization and of slaughter houses in total production will increase. It is considered that the production of meat preparation factories will increase in relation to that of households.

TABLE 88 — Estimates of Production (Tons)

	1962	1963	1967
Meat	462 000	542 000	666 000
Production of the Meat and Fish Organization and Slaughter houses	171 000	220 000	291 000
Sausage (sucuk)	4 600	4 850	6 348
Production of factories		3 200	4 200
Pastirma	3 600	3 970	5 191
Production of factories		2 600	3 400
Sausage - salami	410	440	570
Production of factories		440	570

It is difficult to estimate the production of such by-products as intestines, offals, bones, blood, hides and tail fat, as an important part of slaughterings take place outside of slaughter houses. The major part of these products is wasted. Only skins and hides used internally or exported after they are submitted to certain processes. Since there is no demand as yet for most of these by-products, no discrepancies can be said to exist between supply and demand.

VALUE ADDED

For the resasons explained above, only the production of slaughter houses and the Meat and Fish Organization is included in value added calculations. Value added is based on the income created as a result of slaughterings and the by-products obtained.

TABLE 89 — Value Added (Thousand TL.)

Years	Value added	Index
1962	76 171	100
1963	99 450	130
1967	130 802	172

INVESTMENTS

Total investments by the Meat and Fish Organization and slaughter houses in the coming years are shown in Table 90. In particular, in order to implement successfully the measures specified below, the Meat and Fish Organization will make important investments to expand existing cold storage facilities and erect new ones in production regions which are remote from consumption centers; it will also provide the necessary special vehicles and establish feeding pens and similar installations.

TABLE 90 — Investments (Thousand TL.)

Years	Total	In foreign currency
1963	4 600	500
1964	20 000	4 000
1965	25 000	5 000
1966	15 000	3 000
1967	33 100	6 000

FOREIGN TRADE

It is planned to increase exports of live animals in coming years as shown in the agricultural section. The Meat and Fish Organization must also take measures to export meat.

MEASURES

a. As government price-fixing has had adverse effetcts on the development of animal husbandry and cattle fattening, the control on meat prices will be lifted. If the need to fix ceiling prices arises, these will be determined by Ministries of Agriculture and Commerce, upon the proposal of municipalities.

b. The interventions of the Meat and Fish Organization on the market will be designed to prevent excessive and artificial price increase. As it will also assume a larger share of the distributive trade after price control is removed, the Meat and Fish Organization will help to establish better competitive conditions on the meat market, thereby ensuring that producers receive a greater part of consumer prices.

c. It will be necessary to encourage the consumption of frozen meat in order to maintain the stability of meat prices. The Meat and Fish Organization will make arrangements, in particular by establishing cold storage facilities in the eastern provinces, to sell part of the production as refrigerated or deep-frozen meat. The Organization will also conduct market studies and studies on the improvement of quality in order to sell frozen meat on foreign markets.

d. Regulations limiting slaughterings to certain weights will be strictly enforced. In some large cities it will be possible to classify meat by grade and cuts and set prices accordingly.

e. The amount of credit granted by the Meat and Fish Organization to producers will be raised to a sufficient level to answer the purpose for which it is given. In granting credits the Organization will encourage the organization of animal breeders' cooperatives.

f. Meat, milk and wool problems will be considered jointly and a policy on these lines will be adopted so that better use can be made of common facilities and their personnel.

g. Additional establishments will be set up for the full utilization of by-products.

h. More livestock markets and relevant facilities will be set up.

MILK PRODUCTS INDUSTRY

BASIC PRINCIPLES AND METHODS

The dairy product industry has a very important effect on nutrion in general and on child health, in particular. Milk production varies considerably according to regions and seasons, and in some parts of the country, there is a continuous shortage of milk products. This has a harmful effect on infant health and the care of the sick. Therefore the basic objectives in this industry are to utilize milk production more rationally; to process the surplus production of certain regions and supply the regions of shortage with these processed products; to develop dairy farming and stablize milk production in regions where conditions are favorable and to make the best use of this production.

At present, milk producers are unorganized and their income from this production is low. The inadequacy of processing and marketing facilities produce important price fluctuations and lead in general to the wasteful utilization of milk and low returns for milk producers. As a consequence economic holdings engaged in dairy farming cannot be formed, producers cannot make the necessary investments and milk yields per cow remain at a very low level. In estimating per capita consumption in various milk products in the plan period, the 1950 - 1960 consumption figures were analysed and the consumption habits of the population, the increase in incomes and possible developments in milk substitutes were taken into account. In assessing production and utilization possibilities, account was taken of the regions where milk production is abundant and could be further developed and of important consumption centers. In production estimates, marketing possibilities were also considered.

PRESENT SITUATION

Turkey's annual milk production is approximately 3 million metric tons ,of which about 93 per cent is processed into yoğurt, cheese, butter, pasteurized milk and powder milk. This percentage indicates that liquid milk consumption is little developed in Turkey. The most important of the four existing milk pasteurizing plants is the Atatürk Orman Çiftliği in Ankara. In most cities, milk is supplied by milk peddlers. This has disadvantages both from the view point of the quality of milk and the manner in which it is distributed.

Table 91 shows present production and consumption levels for dairy products.

TABLE 91 — Present Consumption and Production of Milk Product

	Production (Tons) Manufactured in dairies	Total	Individual Consumption (Kg.)	Capacity (Tons)
Yogurt	130,000	600,000	20.0	—
White Cheese (1)	61,000	61,000	2.0	—
Hard Cheese (Kaşar)	11,400	11,400	0.387	—
Butter	5,200	95,000	3.2	—
Pasteurized milk	6,700	6,700	—	10,775
Powder milk	500	500	—	1,000
Milk for liquid consumption	—	202,250	6.875	—

(1) Total white cheese production is a little higher than that of manufactured cheese. This is due to the fact that certain quantities of white cheese, for which data is unavailable, are made in households.

The milk equivalent of the dairy products in the above Table is 2 843 450 tons. The milk processed industrially is about 513 450 tons or 17 per cent of total milk output. Industrially processed milk is only 18 per cent of total processed milk.

Table 92 shows the utilization of milk for processing into various products.

TABLE 92 — Utilization of Milk Production

Milk Products	Milk (Tons)	Percentage
Yogurt	682,000	22
White Cheese	183,000	6
Hard Cheese (Kaşar)	71,250	2
Butter	1 900,000	62
Pasteurized milk	6,700	1
Powder milk	500	—
Milk for liquid consumption	202,250	7
TOTAL	**3 045,700**	**100**

22 per cent of yoğurt production and 5.5 per cent of butter production take place in industrial dairies and the rest in households. The amount of household production which is marketed is not precisely known. A relative increase in the production of industrial dairies is expected to take place in the plan period.

In addition to the above milk products, various kinds of cheese are produced in village households which are made mostly of skimmed milk and are marketed only in negligible amounts. The per capita consumption of these varieties of cheese is close to 4 Kg. a year.

Most of the privately owned dairies are primitive and need to be improved. The four existing plants which produce powder milk are located in Ankara, İstanbul, Bursa and Kars. These factories work at 50 per cent of their capacity and as a result of the techniques used, the quality of their output is poor.

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CONSUMPTION

To meet the demand for milk and milk products in the plan period, modern plants must be set up in various parts of Turkey. The setting up of these plants will also contribute significantly to the development of dairy farming. Pasteurized milk factories will be established in the main cities in the plan period. The powder milk, butter and cheese factories which will be set up in Eastern Turkey will not only contribute to the development of that particular area, but will also help to meet the requirements of regions where there is milk shortage. It is expected that the production of milk products in the plan period (Table 93) will meet the demand.

TABLE 93 — Output of Milk Products **(Tons)**

	Yogurt		Butter		White	Hard	Pasteur.	Pow.
	Industrial	Total	Industrial	Total	cheese	cheese	milk	milk
1963	152,009	609,355	5,248	90,768	67,168	15,582	7,250	500
1967	264,000	800,252	5,812	101,469	93,351	21,985	26,030	4,600
1967 Index 1962=100	203	131	112	112	139	141	359	920

INVESTMENTS

In addition to public investments in the milk manufacturing industry, the possibility is being considered of using UNICEF aid to finance factories which will meet pasterurized milk requirements in large cities.

In order to promote dairying in the East and to make better use of a milk production which has currently almost no commercial utilization, milk processing units will be established in various Eastern regions.

The private sector is expected to invest in the dairy products industry in the plan period. Investments in this branch of activity during the plan period are shown in Table 94.

TABLE 94 — Investment in the Dairy Products Industry **(Thousand TL.)**

Years	New Investments	Maintenance Investmens	Total In Foreign Currency	Total
1963	8.872	462	4.704	9.334
1964	16.258	462	8.750	16.720
1965	11.700	890	6.689	12.590
1966	14.450	1.290	7.729	15.740
1967	10.950	1.190	6.219	12.140
TOTAL	**62.230**	**4.294**	**32.069**	**66.524**

FOREIGN TRADE

Export possibilities may exist for cheese. The quality of this product at present does not lend itself to exports so exports are not envisaged in the plan period.

However, the preferences of foreign markets should be studied and market surveys undertaken in order to start the manufacture of cheese of the required quality. Export possibilities do not exist for other milk products. Imports of processing material are not very significant. The annual import value of aluminium strips, waxed wrapping paper and certain chemical products to be used as laboratory supplies is estimated at around 100 000 TL.

VALUE ADDED

Value added in the milk products industry is shown in Table 95.

TABLE 95 — Value Added

(Thousand TL.)

	1962	1963	1967
Value added	245 937	284 497	431 220
Index	100	116	175

The production of pasteurized milk and powder milk will show the largest increases in the plan period. White cheese will constitute 44 per cent and pasteurized milk and powder milk together 34 per cent of the total value added in 1967.

MEASURES

a. The main reason for the lack of development in dairy farming is the absence of a stable market for milk. In the Eastern regions, in particular, the lack of demand in the season when milk is abundant makes it impossible to utilize this production. To remedy this, dairies where milk will be collected and processed will be set up in various parts of the country.

b. The existing State factories and those that will be set up later will be brought under a single management.

c. Veterinary facilities and other services (such as in connection with feeding) designed to promote the development of dairying will be provided to producers.

d. Producers will be encouraged to form production and sale cooperatives. Facilities will be granted for the setting-up milk processing equipment in cooperatives in regions distant from factories.

e. The domestic consumption of basic animal feeds, such as oil cakes, will be encouraged.

f. Most private dairies are primitive. Measures must be taken to promote the quality and decrease the cost of their products.

g. Municipalities should apply strictly the foodstuff regulations concerning milk and milk products.

CANNING INDUSTRY

BASIC PRINCIPLES AND METHODS

This industry embraces the canning of vegetables, fruit, fish, meat and the manufacture of tomato concentrates, fruit juice, marmalade, food preparations, jam, syrup, pickles, salted fish and frozen meat. With regard to fruit, vegetables and fish, Turkey has abundant resources. The utilization of these resources in the most rational way depends on the establishment of a large-scale canning industry.

If low-cost production and steady supplies can be achieved by modern production techniques in both the existing plants and those to be set up, internal demand will increase considerably and an important part of foreign demand will be met. It is desirable that exports of such goods should develop together with those of the traditional goods.

PRESENT SITUATION

According to 1960 figures, there are 44 canning factories in operation today, A definite figure cannot be given for the total capacity of these factories as capacity varies widely from one branch to another. Capacity in fruit and vegetable canning factories is 37 000 tons and in fish canning 12 300 tons. In the rest, capacity is very elastic and varies with demand.

There is little canned food consumption in Turkey. The chief reason for this is the high prices of canned products and the availability of fresh fruit and vegetables in almost every season.

Canned products are generally consumed in cities and in the winter months. It is expected that increased urbanization, the tendency for women to work and income increases will together push up the consumption of canned products in the coming years.

Past consumption figuries do not show any regular upward or downward trends. For this reason, an estimated level of per capita consumption was taken as basis and it was further assumed that consumption would increase by 7 per cent annually with the increase in incomes. For 1962 per capita consumption estimates in canned products are as follows (*) :

Canned vegetables	200 gr.
Cannet fruit	17 gr.

(*) Excluding household canning.

Tomato concentrate	30 gr.
Canned marmalade	4 gr.
Food preparations	20 gr.
Jams	50 gr.
Pickles	15 gr.
Canned fish	55 gr.

Production is very low in relation to existing capacity and there is a large unused capacity. Production figures in recent years are given in Table 96.

TABLE 96 — **Production in Canning Industry by Years** (Tons)

	1957	1958	1959	1960
Canned Vegetables	4 659.3	7 650.4	6 300.8	2 290.6
Canned Fruits	327.5	776.8	340.9	104.0
Tomato concentrate	537.5	835.0	1 362.7	625.2
Marmalade	130.1	88.7	111.2	—
Food Preparation	318.6	658.2	943.3	186.1
Jam	1 298.3	1 801.7	1 727.9	1 207.5
Pickles	436.0	650.5	334.2	381.9
Canned Fish	2 123.4	1 164.7	670.2	1 517.7
TOTAL	**9 830.7**	**13 626.0**	**11 791.2**	**6 313.0**

FOREIGN TRADE

Canned food exports have varied greatly in recent years. It is difficult to estimate future exports on the basis of these series. Exports of canned fish, in particular, have shown abnormal fluctuations. The investments to be undertaken and the market studies to be made in the next few years will help to promote exports.

DEMAN PROJECTIONS

Demand forecasts for canned products in 1963-1967 are given in Table 97.

TABLE 97 — **Demand Projections** (Tons)

	1960	1964	1967 Index 1963=100
Canned Vegetables	5 475	9 470	172.9
Canned Fruit	545	812	148.9
Tomato concentrate	968	1 421	146.8
Marmalada	121	271	223.9
Food Preparations	666	1 015	152.5
Jam	1 573	2 198	139.7
Pickles	484	710	146.7
Canned Fish	1 785	2 638	147.7
TOTAL	**11 617**	**18 535**	**159.6**

PRODUCTION TARGETS

In addition to meeting the domestic demand shown in the above Table, annual production should attain a level where it can also meet part of the foreign demand for canned fish, fruit and vegetables.

INVESTMENTS

Though it will not be possible to use the present capacity of the canning industry fully in the plan period, investments will have to be made in this industry in order, on the one hand, to lower costs by fostering competition, and thus increase domestic consumption and, on the other hand, to extend and improve the existing outfits and reach European standards in the goods produced, thus promoting exports.

It is known that the private sector will make investments of about 25 million TL. in this industry in the coming years. There is need for a considerable amount of working capital in this field. However, higher investments, bringing the total up to 35 million TL. will be necessary in order set up large and modern export-oriented plants or to enlarge and improve existing ones.

FOREIGN TRADE

Food preparations and a small amount of canned fish and canned fruit are presently exported. Export prospects may improve if costs are lowered.

MEASURES

1. The reason for the high prices of canned products is the high cost of auxiliary materials such as tin and tinplate. Measures will be taken to lower the costs of these auxiliary materials, and the use of substitute products in this connection will be investigated.

2. To ensure stability in export deliveries, cooperation between canners and production cooperatives will be established and recourse will be had to imports in years when production is deficient.

Measures will be taken to promote the consumption of canned domestic products in regions suffering from food shortages.

FLOUR INDUSTRY

BASIS PRINCIPLES AND METHODS

This branch of industry concerns the manufacture of flour from wheat. Other cereal meals have not been considered. The production of modern mills only which supply the flour requirements of cities and towns has been taken into account. No information could be obtained on primitive mills which supply about two thirds of total flour requirements and principally those of villages.

PRESENT SITUATION

Definite figures cannot be given for the number and capacity of (black-stone) primitive mills. According to a survey made in 1955, there are 16,000 of these mills with a total capacity of 5,343,000 tons of wheat. Modern mills are mostly situated in big cities and towns. The annual capacity of these mills, which numbered about 300 in 1960, amounts to 2,222,000 tons of wheat. Therefore the total annual capacity of all mills in Turkey is 7,560,000 tons.

The extraction rate in modern mills is 80 per cent. According to this, the flour capacity of modern mills in recent years was 1,778,000 tons. The actual production of modern mills in 1960 amounted to 1,156,000 tons.

No reliable information exists on flour consumption. The results of the studies made by various departments indicate that annual per capita flour consumption in cities and towns is 103.5 kg. of which 96 kg. is for bread, 6 kg. for cakes, pastry, etc. and 1.5 kg. for biscuits.

DEMAND PROJECTIONS

In preparing demand projections, the total amount of wheat which is expected to be consumed during the plan period was first calculated. After deducting seed requirements and wastage, the demand for wheat was estimated as follows :

	Quantities (Thousand Tons)
1963	5,925
1967	6,923

Wheat is consumed in the form of flour and cracked-wheat. The demand for cracked wheat, based on per capita cracked-wheat consumption, was estimated as follows :

	Quantities (Thousand Tons)
1963	756
1967	843

The amount of wheat required to meet the estimated cracked-wheat demand is :

	Quantities (Thousand Tons)
1963	800
1967	890

The demand for flour, calculated by deducting the wheat to be used for cracked-wheat from total wheat consumption, is as follows :

TABLE 98 — Flour Demand

(Thousand Tons)

Years	Modern Mills	Primitive Mills	Total
1963	1 600	2 810	4 410
1964	1 700	2 880	4 580
1965	1 800	3 000	4 800
1966	1 900	3 060	4 960
1967	2 000	3 188	5 188

PRODUCTION TARGETS

Annual production must be on a level to meet the demand estimates given in the above Table.

INVESTMENTS

The capacity of modern mills according to the latest data in 1960 is of 1 780 000 tons. Total flour demand can thus be met without any increase in capacity. The geographical distribution of mills, however, is not adequate and the gradual conversion of primitive mills to flour factories will have to take place. The distribution of investments over the plan years is shown in Table 99.

TABLE 99 — Investments

(Thousand TL.)

Years	In Foreign Currency	Total
1963	7 500	14 885
1964	5 000	9 885
1965	1 500	3 500
1966	2 000	4 000
1967	1 000	4 000
TOTAL	17 000	36 270

VALUE ADDED

The value added by the production of 1 kg. of flour in modern mills is 6.25 krş. According to this, the value added in the flour industry (modern mills) in the plan period is as follows :

Value Added

Years	Thousand TL.
1963	100 000
1967	125 000

EDIBLE VEGETABLE OIL INDUSTRY

BASIC PRINCIPLES AND METHODS

The production of oil seeds, although it occupies an important place in Turkey's agriculture, is not able to meet the internal demand for edible vegetable oils. This gives rise to periodical imports of edible vegetable oils. At the same time, certain oilseed exports also take place.

The primary aim is to develop this industry so that domestic production can meet internal vegetable oil requirements and exports of olive oil can be increased. Vegetable oil consumption develops at the expense of that of animal fats, as vegetable oil are healthier and cheaper. Therefore measures must be taken to make this industry capable of meeting the growing demand for vegetable oils.

The increase in vegatable oil consumption in the plan period is estimated on the basis of trends in the per capita consumption of different vegetable oils between 1950 and 1960 and the income elasticity of demand for these products.

Developments in oil seed cultivation, oil seed exports during the plan period and alternative domestic uses of oil seeds were considered in drawing up production estimates.

PRESENT SITUATION

Turkey's total vegetable oil production is estimated at 164,600 tons. The distribution of production between the different kinds of oil is shown in Table 100.

TABLE 100 — Production of Vegetable Oils

Oil	Thousand tons per year
Olive oil	80.0
Cotton-seed oil	44.0
Sunflower oil	27.0
Opium-seed oil	8.8
Sesame oil	4.4
Total	164.6

Olive oil takes the most important place in vegetable oil production with 48 per cent of the total and is followed by cotton-seed oil (27 per cent) sunflower-seed oil (17 per cent) opium-seed oil (5 per cent) and sesame oil (3 per cent).

Vegetable oil production has shown fluctuations in the past ten years, but, on the whole, increase have been slight and the gap between consumption and production has continued to widen. In recent years, oil imports have gone up steeply to reach 37,000 tons in 1960. Imports are mainly of soya-bean and cotton-seed oil.

Soya-beans are sown in Turkey but as there are no installations for extracting oil from soya-beans, this product which is a valuable source of oil and protein is exported.

Peanuts are grown in southern Anatolia but mostly consumed as nuts and oil extraction does not take place.

Vegetable oils are manufactured in modern factories and in primitive refineries. The yield and quality of the oil produced by primitive methods is low.

A certain amount of unused capacity exists in the vegetable oil industry. Fluctuations in the oil seed production of various regions partly account for this.

PRODUCTION

Estimates for vegetable oil production in the plan period are given in Table 101. Peanut and soya-bean oil will be produced as from 1965. The area sown to sesame will remain constant, and it is estimated that there will be a decrease in sesame oil production, as sesame is also used in other foodstuffs. There will be a very small increase in opium seed oil production as opium growing is limited by international agreements. Important developments are expected in the production of sunflowerseed oil as sunflower crops will be increased in South-East Anatolia. Production and exports of olive oil will be stepped-up.

TABLE 101 — Production Estimates for Vegetable Oils

Oils	1962	1963	1967
Olive oil	80.0	85.2	98.0
Cotton-seed oil	44.4	47.5	65.5
Sunflower-seed oil	27.0	28.5	42.4
Soya-bean oil	—	—	1.7
Peanut oil	—	—	6.9
Sesame oil	4.4	4.4	4.2
Opium-seed oil	8.8	8.8	9.2
TOTAL	**164.6**	**174.4**	**227.9**

FOREIGN TRADE

a. Exports

As seen from production and demand forecasts, the oil shortage will be reduced to a certain extent by the development of the vegetable oil industry but oil imports will still be necessary in the plan period. The estimated surplus olive oil production will be exported. The higher prices fetched by olive oil on internal and foreign markets in comparison to other oils and the limited utilization possibilities of olive oil in relation to other vegetable oils and margarines should stimulate olive oil exports.

Olive crops show an alternance of one good and one bad year. Olive oil exports are therefore likely to vary from year to year; total exports in the five-year period are expected to amount to 35,000 tons.

Foreign exchange earnings from olive oil exports are expected to average 30 million TL. per annum, and total earnings in the plan period 151.2 million TL.

b. Imports

To meet production deficits in vegetable oil, about 58,800 tons of oil will be imported annually during the five-year plan period. The five-year total will be 294,000 tons. Annual foreign exchange requirements for oil imports will average about 223 million TL. and total some 1,117.2 billion TL. in the plan period.

Certain imported products are required for the processing and marketing of oil seeds. The most important of these is tinplate. As tinplate will not be manufactured in Turkey until 1965, imports will continue until this date. Imports of filtering earth, caustic soda, pressing bags and of certain chemicals will be maintained for a some time.

CONSUMPTION

Vegetable oil consumption in the plan period is shown in Table 102.

TABLE 102 — Estimates of Vegetable Oil Consumption

Years	Kg. Per Capita	Index	Total Consumption (Thousand tons)	Index
1962	7.300	100	214.7	100
1963	7.519		227.5	
1964	7.731		240.6	
1965	7.943		254.2	
1966	8.155		168.3	
1967	8.367	115	283.0	132

Vegetable oil consumption will increase in the plan period. The main reasons for this increase are the low cost of vegetable oils in comparison to animal fats, the fact that liquid oils are wholesome and the growing preference of consumers for vegetable margarines. As seen from Table 101, production will not be equal to consumption in the plan period and imports will take place.

VALUE ADDED

Value added in the vegetable oil industry in the plan period is shown in Table 103.

TABLE 103 — Value Added in the Vegetable Oil Industry

Years	Total Output of Vegetable Oils (Thousand Tons)	Value Added (Million TL.)	Index
1962	164.6	192.6	100
1963	174.4	205.7	107
1967	228.0	266.3	138

INVESTMENTS

New investments are necessary for the development of oil seed production in some regions of Turkey and for the establishment of modern installations.

Estimated total private and public investments in the vegetable oil industry during the plan period are shown in Table 104.

TABLE 104 — Investments in the Vegetable Oil Industry (Thousand TL.)

Years	New Investments	Maintenance Investments	In Foreign Currency	Total
1963	16 100	3 330	7 820	19 430
1964	9 400	3 510	8 040	12 910
1965	10 350	4 010	9 390	14 360
1966	5 450	4 090	3 510	9 540
1967	14 050	4 370	10 330	18 420
TOTAL	**55 350**	**19 310**	**39 090**	**74 660**

MEASURES

a. As vegetable oil production does not meet demand, oil seed exports must gradually be discontinued and seeds must be processed internally.

b. As present processing techniques are primitive, the content of oil in oil-cakes is still high and oil is exported at low prices together with these cakes. The industry must therefore improve its production techniques and a less wasteful utilization of oilcakes and olive oil cakes must be promoted.

c. Processing installations should be modernized. With the increase of yields, oil production will go up and oilcake prices will fall. This will have a favorable effect on the development of animal husbandry.

Oil-seed producers should be encouraged to form processing cooperatives and to utilize their products directly so as to prevent the losses occurring in extraction.

d. The necessary measures will be taken to prevent the use of edible oils in soap manufacturing and to ensure that only oil which is not suitable for refining is used in the manufacture of soap.

VEGETABLE MARGARINE INDUSTRY

BASIC PRINCIPLES AND METHODS

The vegetable margarine industry was founded recently and production has made great strides to meet increasing demand. The consumers' preference for margarine is explained by its special technical preparation, its appearance, its cheapness in comparison to animal fats and the fact that it has no harmful effects on health. Moreover, this industry is of special importance in the utilization it affords of domestic oil seeds. Present consumption figures and income elesticity of demand were taken into account in estimating future consumption. A saturation point in margarine demand is not expected in the plan period.

Production targets have been set so as to meet demand estimates.

PRESENT SITUATION

Present vegetable margarine production is estimated at about 60 000 tons. Although total production has shown a sharp increase in recent years, the production of certain plants has been decreasing. There is unused capacity in the margarine industry. The new plant just erected in İstanbul has not yet started production. As very little stocks are carried over from year to year, it may be assumed that total production is consumed and that annual per capita consumption is close to 2 kgs.

CONSUMPTION

Margarine consumption is increasing at a rapid rate. As consumers prefer margarine to animal fats and other vegetable oils, it can be said that consumption will keep up with production.

Per capita consumption estimates in the plan period are shown in Table 105.

TABLE 105 — Estimates of Margarine Consumption

Years	Kg. Per Capita	Index
1962	2.040	100
1963	2.117	104
1967	2.365	116

PRODUCTION

Production in the plan period is expected to develop as shown below.

TABLE 106 — Estimates of Margarine Production

Years	Production (Thousand Tons)	Index
1962	60.0	100
1963	64.0	107
1967	80.0	133

Though it is known that some margarine plants operate below capacity, it is estimated that new investments will be made in this industry in the plan period, because of the lack or insufficiency of plants in certain regions where location conditions are favorable. There is no doubt that new plants established in regions where oil seed production is abundant will be in a strong competitive position because of transport advantages.

With new investments in the plan period, capacity will largely suffice to meet production targets for 1967.

There will be no exports as vegetable oil production is insufficient.

IMPORTS

Certain imported inputs such as caustic soda, Fuller's earth, D vitamin, dyes, certain other chemicals and tinplate, tin and waxed paper are used in margarine production. The annual value of these imports will average 19 million TL. and the total for five-years, 95 million TL.

Vegetable oil import requirements for the production of margarine have already been considered in the previous chapter on the vegetable oil industry.

There will be no need tinplate imports after 1965 when tinplate will be manufactured internally. Total import requirements will however increase after 1966 when new margarine plants will have begun to operate and will need other imported inputs.

VALUE ADDED

Value added estimates for this industry are shown in Table 107.

TABLE 107 — Value Added

Years	Value Added (Thousand TL.)	Index
1962	62.400	100
1963	66.560	107
1967	83.200	133

INVESTMENTS

Investments in the margarine industry in the plan period are shown in Table 108.

TABLE 108 — Investments

(Thousand TL.)

Years	New Investments	Maintenance and Renewal Expenditures	In Turkish Currency	In Foreign Currency	Total
1963	—	2 000	1 200	800	2 000
1964	10 000	2 000	11 200	800	12 000
1965	15 000	2 000	15 800	1 200	17 000
1966	—	2 000	1 200	800	2 000
1967	—	2 000	1 200	800	2 000

SUGAR INDUSTRY

BASIC PRINCIPLES AND METHODS

This industry covers the production of the sugar-beet processing factories. Both the main products (lump and granulated sugar) and by-products (molasses and cakes) are considered.

Since the necessary balance between the area sown to sugar-beet (which accounts for beet production) on the one hand, and sugar consumption and exports, on the other hand, has not been struck in the past, stocks in hand accumulated and had to be exported at prices far below costs. Moreover, in order to process the excess sugar-beet production, the annual working period of factories was raised from 100 to to 180 days in certain years. To balance production and and consumption is the target in the plan period. Per capita sugar consumption is very low in Turkey. In the next five years, consumption will increase in line with incomes.

PRESENT SITUATION

There are fifteen sugar refineries in Turkey. This figure will rise to sixteen with the completion of the Ankara refinery which began trial operations in 1962 and will start production in 1963, and to seventeen with the Kastamonu refinery which will begin trial operations in 1963 and full production in 1964.

The present capacity of sugar refineries is shown in Table 109.

TABLE 109 — Capacity of Sugar Refineries

Refineries	Capacity (Thousand Tons)
Adapazarı	34.0
Alpullu	25.0
Amasya	27.9
Burdur	27.0
Elazig	18.0
Erzincan	18.6
Erzurum	18.0
Eskişehir	37.5
Kayseri	27.9
Konya	29.3
Kütahya	14.0
Malatya	16.8
Susurluk	25.2
Turhal	37.5
Uşak	18.1
TOTAL	375.0

Sugar-beet production has shown an increase, particularly in the last few years, and sugar production has exceeded capacity to reach 499,747 tons in 1959 and 643,497 tons in 1960. To reach these levels, refineries had to function for 180 days instead of the normal 100 days. Measures were taken to lower production in 1961 but output dropped only to 432,000 tons against a consumption of 331,740 tons.

DEMAND PROJESTIONS

Sugar demand in the plan period will rise in step with incomes. Consumption estimates, shown in Table 110, were calculated on this basis.

TABLE 110 — Estimates of Sugar Consumption **(Thousand Tons)**

Years	Consumption
1962	357
1963	375
1967	494

PRODUCTION TARGETS

To meet demand estimates, sugar production targets were set at 490,000 tons for 1967. The present production capacity of the sixteen sugar refineries is 393,000 tons. In view of the production targets of 490,000 tons for 1967, capacity will have to be increased; will the production of the Ankara refinery starting in 1963 (capacity : 18,000 tons), that of the Kastamonu refinery in 1964 (capacity : 18,000 tons) and with the expansion of other refineries, production figures should stand at the levels shown in Table 111.

TABLE 111 — Production Estimates **(Thousand Tons)**

Years	Production
1963	400
1964	400
1965	400
1966	440
1967	490

After 1963, production will fall short of the estimated demand. The difference will be met by the stocks in hand.

TABLE 112 — Estimated Capacity of Sugar Refineries

Years	Capacity (Thousand Tons)
1963	393.0
1964	411.0
1965	444.6
1967	490.7

As can be seen from these figures, refineries will work for the normal length of time.

Due to the lack of adequate data, production estimates for various sugar products and for helva could not be made. Export possibilities exist for helva and certain sweetmeats.

INVESTMENTS

Investments in new factories and to expand certain plants in the plan period are shown in Table 113.

TABLE 113 — Investments in the Sugar Industry (Thousand TL.)

Years	In Foreign Currency	Total
1963	3 251	41 023
1964	17 180	59 057
1965	10 948	48 034
1966	2 944	27 144
1967	60	38 307
TOTAL	**34 383**	**213 565**

VALUE ADDED

Sugar-beet which is the raw material for the production of sugar, constitutes the most important cost item. It amounted to 86 per cent of production costs in 1960.

For the 1961 production, the cost of inputs of raw and auxiliary materials entering into one kg. of sugar were found to be 1.369 TL. According to this, value added in the plan period will be as shown in Table 114.

TABLE 114 — Value Added

Years	Production (Thousand Tons)	Value of Production (Mill. TL.)	Value of Inputs (Mill. TL.)	Value Added (Mill. TL.)
1962	400	1 000	547.6	452.4
1963	400	1 000	547.6	452.4
1967	490	1 225	670.8	554.2

The value added by the sale of molasses should be added to the above figures. Molasses, which is a by-product, has no inputs.

In the alcohol industry, the cost of molasses amounts to 5 kr. per kg. (80,000 tons of molasses are used by this industry). Although this price is low, it has been used as such it was considered that the value added in the alcohol industry would thus be increased and that there would be no difference in total value added in the economy. The feed industry pays about 15 per kg. for molasses.

As sugar-beet yields about 4 per cent of molasses, the output of molasses in coming years will be as shown in Table 115.

TABLE 115 — Molasses Production

Years	Production (Tons)	Value (Thousand TL.)
1962	108 000	6 120
1963	106 640	5 916
1967	130 640	20 520

TABLE 116 — Total Value Added (Sugar + Molasses)

Years	Value Added (Million TL.)	Index
1962	458.5	100
1963	458.3	100
1967	574.7	125

MEASURES

a. Production in excess of requirements and standard capacity raises costs. Care should, therefore, be taken to keep sugar-beet production on a level corresponding to production capacity. Sugar exports should only be resorted to as a means of regulating stocks.

b. Exports of surplus production should as far as possible be in the form of finished products.

BEVERAGE INDUSTRY

Beer, wine and rakı which have special importance in this Industry, are treated separately in this section.

1. BEER

a. Consumption and Demand

Recent statiscal figures show that per capita beer consumption in Turkey is increasing, but is not evenly disributed throughout the country. This is due to the fact that beer is mainly distributed in the regions where it is produced, as production lags behind demand.

Beer output in Turkey is far from meeting the demand. Past trends were therefore not used in demand projections for the plan period. Assuming an annual per capita consumption of 1.96 liters, demand in the plan period will be as shown in Table 117.

TABLE 117 — Demand Estimates for Beer (Million Litres)

Years	Demand Estimates	Index
1962	35	100
1963	41	117
1964	47	134
1965	54	154
1966	61	174
1967	70	200

b. Production

Beer is produced by the two breweries of İstanbul and Ankara.

The normal capacity of the Bomonti brewery in İstanbul is 10 million liters. Production has been raised to 22 million liters by operating above capacity. 89 per cent of this output is consumed in İstanbul and neighboring towns.

The annual capacity of the Ankara brewery is 4 million liters. By working above capacity, this factory has also produced up to 10 million liters. 38 per cent of this output is consumed in and around Ankara.

It is clear that current production cannot meet the growing demand and that new investments are needed.

Beer industry is a typical example of an industry which should have been established after a more thoroughy study of consumption trends. As water constitutes

90 per cent of beer, the most important cost items are transport costs. Since 3 to 3.5 liters of beer are obtained from 1 kg. barley, the transport of barley is less costly than that of beer. Bottles and barrels also affect transport costs. One of the factors determining location is the availability of succient and good quality water. The water used is 10 to 15 times the amount of beer brewed. Energy is another cost item, but not as important as those mentioned previously.

In 1967, with the implementation of the projects to be undertaken in the plan period to meet the demand for beer, production capacity will increase to the levels indicated in Tables 118 and 119.

TABLE 118 — Production Capacity of Malt Factories (Thousand Tons)

Factories	Current Capacity	Capacity After Expansion
Istanbul Factory	2.6	5.0
Ankara Factory	2.4	2.4
TOTAL	**5.0**	**7.4**

TABLE 119 — Production Capacity of Breweries (Million Litres

Factory	Current Capacity	Capacity After Expansion
Istanbul Factory	20.0	15.0
Ankara Factory	10.0	
TOTAL	**30.0**	**15.0**

c: Investments

Investments in the beer industry up to 1967 are shown in Table 120.

TABLE 120 — Investments in Beer Industry (Thousand TL.)

	Installation Investments		Maintenance Investments		Total	
	Foreign Exhange	Total	Foreign Exhange	Total	Foreign Exhange	Total
1963	11 850	23 350	700	3 000	12 550	26 350
1964	18 000	29 950	700	1 900	18 700	31 850
1965	11 500	16 500	500	4 000	12 000	20 500
1966	12 500	14 000	1 000	4 500	13 500	18 500
1967			2 000	5 500	2 000	5 500
TOTAL		**83 800**		**18 900**	**58 750**	**102 700**

d. Value Added

The value added to be ralized in the brewery industry is shown in Table 121.

TABLE 121 — Value Added in Brewery Industry (*)

Years	Output (Million Litres)	Value Added (Million TL.)
1962	32	36.6
1963	37	38.9
1967	70	73.9

(*) As seen from the tables, production will not be able to meet demand in the first plan years. Demand will be met only at the end of the plan period as a result of new investments.

2. WINE

a. Demand

(1) Domestic Demand

The consumption figures of the past ten years show that per capita wine consumption is about 0.6 liters. Religious beliefs can be considered as the main obstacle to an increase in demand.

Per capita consumption trends show a slight annual increase of 0.014 liters in the period 1950-59. This has been taken into account in demand projections.

TABLE 122 — Estimates of Wine Consumption in 1963 - 1967

Years	Per Capita (Litres)	Total Consumption ('000 Litres)	Index
1962	0.617	18 150	100
1963	0.759	22 964	126
1967	0.815	27 566	152

(2) Foreign Demand

Turkish wines are in demand on European markets. Germany, Denmark, the United Kingdom and Sweden are the main importers. A characteristic of Turkish export wine is that its alcohol content is high and that it can be blended with European wines. Diluted Turkish wines are also exported for direct consumption.

It is possible to increase wine exports considerably in the plan period if appropriate measures are taken. The quality of these wines is continuously improving. Various types of grapes are grown in Turkey and this country has an important place in the world with respect to viticulture. Only 3 per cent of the total grape output, however, is used for wine manufacturing.

Another important problem in wine exports is that of cost. The prices of Turkish wines, which are sold at $6 - 9.5 per hectoliter in Europe, are above those of other countries.

There are possibilities of lowering wine costs. More wine exports will be possible if prices are stabilized and quality improved. It is also necessary to utilize grape crops in a better way and to channel more wine grapes to the wine industry. At the present rate of production, 36,293 million liters of wine will be produced in 1967. Export possibilities in the plan period are shown in Table 123.

TABLE 123 — Estimated Wine Exports in the Plan Period **(Million Liters)**

Years	Total Output	Consumption	Export Possibilities	Export Index
1962	20.0	18.2	1.8	100
1963	25.0	23.0	2.0	108
1964	28.0	24.0	4.0	218
1965	31.0	25.0	6.0	324
1966	33.0	26.0	7.0	378
1967	36.0	27.5	8.5	459

b. Production Capacity and its Distribution

Wine manufacturing plants are located in the various vine growing regions spread all over Turkey except in the North and East. The number of private wine makers has increased from 198 in 1957 to 312 in 1959. There are also State establishments making and selling wine. The Monopolies Administration has six factories in operation in Ankara, Elâzığ, Gaziantep, Ürgüp, İzmir and Tekirdağ.

The target output of 36 million liters of wine in 1967 can be achieved through utilization of the present unused capacity of Monopoly factories. As will be seen from a study of production and capacity figures, the private sector has worked at full or above capacity between 1950 - 1960. On the other hand, the production of the Monopoly factories has shown considerable fluctuations and varied between 32 and 87 per cent of capacity. Table 124 indicates the relation between capacity and production.

TABLE 124 — Utilization of Capacity in Wine Industry **(Million Liters)**

Years	Monopolies Capacity	Monopolies Output	Private Sector Capacity	Private Sector Output
1950	13.9	4.4	—	9.3
1955	13.9	9.4	—	15.1
1960	14.3	4.9	—	12.4

Note: Only plants with a capacity of 600 liters and over are included.

In order to increase production, Monopoly factories will have to function at fulll capacity. The private sector tends to increase its capacity. As private sector production in 1959 was 21, and the capacity of the Monopolies is of 14 million liters, total capacity will be sufficient to meet production targets for 1967.

c. Value Added

The value added to be realized in wine production during the plan period is shown in Table 125. The average internal price of wine is 191 kr. per liter, and the the export price 90 kr. The cost of raw and other materials per liter of wine was taken to be 94 kr. for domestic price and 83 kr. for export prices.

It is estimated that foreign exchange earnings from wine exports will amount to about 7.5 million TL. in 1967.

TABLE 125 — Value Added in Wine Industry **(Million TL.)**

Years	Total Value Added	Foreign Exhange
1962	17.6	—
1963	22.5	1.8
1967	27.3	7.7

d. Investments

Present capacity can meet demand, but in order to produce quality wines for export, new investments of about 6 million TL. are needed.

3. RAKI

a. Consumption

Per capita rakı consumption has been increasing steadily in the last ten years at the rate of 0.022 liters per annum. Rakı consumption figures for the plan period, estimated on the basis of this trend are shown in Table 126. Rakı exports are not not envisaged in this period.

TABLE 126 — Raki Consumption in the Plan Period

Years	Per Capita (Liters)	Total (Thousand Lt.)	Index
1962	0.449	12 490	100
1963	0.551	16 671	133
1967	0.639	21 613	173

b. Production

Rakı plants are working at full capacity, even above capacity. In order to meet the estimated consumption of 21.6 million liters in 1967 the present capacity of 12.5 million liters should be increased.

c. Value Added

The value added created in the rakı industry is shown in Table 127.

TABLE 127 — Value added in Raki Industry

Years	Output (Million Liters)	Value Added (Thousand TL.)
1962	14.9	194.1
1963	16.7	217.7
1967	21.6	282.3

In calculating the value added, the average rakı sale price was taken to be 16.92 TL. per liter and the cost of raw and other materials 3.56 TL./Lit.

d. Investments

Proposed investments for the expansion of the five Monopoly plants and the renewal of old equipment are shown in Table 128. In addition to rakı, these factories produce alcohol, liqueurs, brandy and fruit juices. 3.45 million TL. of these investments will be in domestic, and 10.22 million TL. in foreign currency.

TABLE 128 — Investments

Years	Million TL.
1963	5.0
1964	5.0
1965	3.7
TOTAL	13.7

TEA INDUSTRY

BASIC PRINCIPLES AND METHODS

This branch of industry covers the production and manufacture of dry tea from fresh tea leaves.

By improving the quality of the tea produced in Turkey and by increasing output, it has been possible to reduce the amount of tea imported for blending purposes. As exports of Turkish tea seem possible, a source of foreign exchange will be provided by this industry.

PRESENT SITUATION

At present capacity for processing fresh tea leaves is 605 tons a day. Although the length of the campaign is generally of 180 days per year ,it is taken to be 80 days in view of the fact that tea cannot be brought to the factories every day. As annual processing capacity is 48,400 tons and actual tea production in 1962 was 36,300 tons, it follows that there was some 12,000 tons of unused capacity. On the other hand, as tea leaves must be processed as soon as they are brought, 7 new factories with a capacity each of 60 tons a day, or 4,800 tons a year, will have to be built in the plan period. These factories will process the growing tea production and will provide the additional capacity required.

Though there has been a considerable increase in tea output in recent years, 70 per cent of requirements were met by imports. Imported tea is blended with domestic tea to improve its quality. On the other hand, as all domestically produced tea is not used, tea stocks will amount to 5,000 tons in 1963.

ESTIMATES OF CONSUMPTION

TABLE 129 — Estimates of Tea Consumption for 1962, 1963 and 1967

Years	Per Capita (Kg)	Index	Total (Tons)	Index
1962	0.292	100	8.6	100
1963	0.303	103	9.2	106
1967	0.336	115	11.4	132

These estimates are based on 1950 - 57 consumption figures. The abnormal jump in consumtion after 1958, when tea was consumed in larger quantities because of the lack of coffee, was not taken into account.

PRODUCTION ESTIMATES

TABLE 130 — Estimates of Tea Production for 1962, 1963 and 1967

Years	Dry Tea Leaves (Thousand Tons)	Fresh Tea Leaves (Thousand Tons)	Index
1962	7.9	36.3	100
1963	8.5	38.5	108
1967	14.0	63.0	173

FOREIGN TRADE

In order to obtain the desired flavor, domestically produced tea must be mixed with 50 per cent of imported tea. It is estimated that this percentage will fall to 30 by 1967 with the improvement of both tea cultivation and tea processing methods. Imports and import substitution were calculated on this assumption. On the other hand, it was estimated that it would be possible to export the stocks which will accumulate in the plan period.

TABLE 131 — Foreign Trade in Tea (*)

Years	Export Possibilities Quantity ('000 tons)	Export Possibilities Value (Mil. TL.)	Imports Quantity ('000 tons)	Imports Value (Mil. TL.)	Import Substitution Quantity ('000 tons)	Import Substitution Value (Mil. TL.)
1963			4.6	53.6	—	—
1964			4.4	51.1	0.5	5.7
1965			4.1	48.0	1.0	12.0
1966			3.8	44.3	1.6	19.0
1967			3.4	39.9	2.3	26.6
Total	**30.4**	**304.4**	**20.3**	**237.0**	**5.4**	**63.3**

(*) It is assumed that the stocks of 5 000 tons of tea in hand at the beginning of 1963 will be consumed in the five-year period.

CAPACITY AND INVESTMENTS

Tea processing capacity will be increased to meet requirements with the seven new factories which will be built in the plan period and with the improvement of old plants. The capacity of tea industry in the plan years is shown in Table 132.

TABLE 132 — Processing Capacity

(Thousand Tons)

Years	Fresh Tea
1963	48.4
1964	48.4
1965	57.0
1966	82.0
1967	82.0

TABLE 133 — Investments in Tea Industry (Million TL.)

Years	Foreign Exchange	Total
1963	8.3	42.8
1964	9.2	49.4
1965	—	25.9
1966	—	10.7
1967	—	4.8
Total	17.5	133.6

VALUE ADDED

The cost of inputs for the manufacture of 1 Kg. of tea amounts to 14.80 TL. As the sale price of 1 Kg. tea is 40 TL., the value added realized is 25.20 TL. Value added in the industry is shown in Table 134.

TABLE 134 — Value Added in Tea Industry

Years	Output (Thousand Tons)	Value Added (Million TL.)	Index
1962	7.9	199.1	100
1963	8.5	214.2	107
1967	14.0	352.8	177

MEASURES

a. A separate organization designed to promote the development of the tea industry will be set up, if the studies to be undertaken jointly by the Ministries of Agriculture, and Customs and Monopolies point to this need.

b. Tea cultivation will take an important place in the curriculum of the technical agricultural school which will be set up in the tea-growing region.

c. The Ministry of Agriculture will be responsible for giving training in pruning and gathering methods in the regions concerned.

d. Possibilities of increasing the sale of tea on domestic and foreign markets will be investigated.

TOBACCO INDUSTRY

BASIC PRINCIPLES AND METHODS

The basic principle in tobacco industry is to maintain a balance between production, consumption and exports and to solve, or at least alleviate the current problem of stocks. Starting with consumption, it was estimated that total consumption would increase at the same pace as population, and that individual consumption would also show a slight increase as a result of improved social and economic conditions. With regard to exports, outlet possibilities were studied and export estimates were made. After allowing for wastage, production targets were set in accordance with estimated consumption and exports and so as to prevent stock accumulation. The most important problem in this sector is to increase exports.

Tobacco industry is divided into two secondary sectors : (1) the processing of tobacco leaves, and (2) the manufacture of cigarettes, cigars, pipe, tobacco, etc.

CONSUMPTION AND DEMAND

Per capita cigarette consumption has increased in the years 1950 - 1960. This shows that the number of cigarette smokers is steadily increasing. Annual per capita consumption between 1950 and 1960 showed an average increase of 20 gr. The demand for cigarettes in the 1963-1967 period (shown in Table 135) was estimated on the assumption that this rate of increase would be maintained.

TABLE 135 — Demand for Cigarettes in 1963 - 1967

Years	Per Capita Consumption (Kg.)	Total Consumption (Thousand Tons)	Index
1962	1.10	34.2	100
1963	1.16	36.0	105
1967	1.27	43.0	126

CIGARETTE PRODUCTION

No difficulty will be encountered in the five-year plan period in increasing tobacco output to meet the demand for cigarettes. As stated above tobacco production targets for 1963 - 1967 were fixed so as to cover domestic consumption export requirements and wastage. As seen from Table 135, demand at the end of the plan period will have increased by 26 per cent over that of 1962.

CIGARETTE MANUFACTURING CAPACITY

The six factories of the State Monopolies Administration will be unable to meet likely future increases in foreign and domestic demand. These factories are only just able to meet present requirements. Their equipment is obsolate and spare parts cannot be found. All work at above their normal capacity. To reach the 1967 production target, capacity must be expanded and some of the machinery replaced.

TABLE 136 — Present Capacity of the Cigarette Industry (Tons)

Factories	Normal Capacity Monthly	Normal Capacity Annual	Production Monthly	Production Annual
Istanbul	807	9 684	1 049	12 588
Izmir	561	6 732	729	8 748
Adana	239	2 868	311	3 732
Malatya	194	2 328	252	3 024
Samsun	362	4 344	471	5 652
Bitlis	19	288	25	300
TOTAL	**2 182**	**26 184**	**2 837**	**34 044**

As will be seen when considering investment, capacity will be increased in the plan period with the construction of the Maltepe factory in İstanbul and the modernization of the Adana and Malatya foctories. (Table 137).

After the Maltepe factory starts production, the equipment of the Cibali factory will be installed in the Adana and Malatya factories and the Cibali building will be used as a storehouse.

TABLE 137 — Capacity of the Cigarette Industry in the Plan Period (Tons)

Years	Izmir	Samsun	Bitlis	İstanbul	Malatya	Adana	Total(1)	Production (Tons) (2)
1963	6 732	4 344	288	9 684	2 328	2 868	26 184	36 000
1964	6 732	4 344	288	20 000	2 328	2 868	36 500	37 600
1965	6 732	4 344	288	20 000	5 200	5 600	42 104	39 400
1966	6 732	4 344	288	20 000	5 200	5 600	42 104	41 400
1967	6 732	4 344	288	20 000	5 200	5 600	42 104	43 000

(1) The figures in this column are based on normal one-shift capacity.

(2) The production figures for 1963 and 1964 will be reaziled by over-working of present factories to meet demand. Studies have shown that these levels could be attained by straining current capacity to the utmost. The figures for 1965 and 1966 are based on the assumption that newly-built factories will start to operate immediately and attain a volume of production above their capacity.

PRODUCTION AND CONSUMPTION LEVELS

Tobacco exports show important yearly variations as will be seen from a study of the 1950-1960 period. It is therefore difficult to draw up estimates of tobocco exports for the plan period. The export estimates for 1963-67 in Table 138 are based essentially on past trends, and take into account special cases, export possibilities and the exports policy to be followed.

TABLE 138 — Production and Consumption (Thousand Tons)

Years	Exports	Consumption	Production
1963	76.0	36.0	135.0
1964	78.0	37.6	137.0
1965	80.0	39.4	140.0
1966	81.0	41.4	145.0
1967	83.0	43.0	150.0

Note: Production — (Exports + Consumption) = Wastage.

COST OF TOBACCO LEAF PROCESSING

The cost of processing the leaves purchased from producers accounts for 66 per cent of tobacco export prices. As the export price of tobacco is taken to be 1000$/ton, the cost of raw and other materials amount to 660 $/ton.

VALUE ADDED

The value added by the processing of tobacco leaves and the manufacture of cigarettes is shown in Table 139.

TABLE 139 — Value Added in Tobacco Industry

Years	Cigarettes		Processing of leaves		Total (Million TL.)
	('000 tons)	Value Added (Million TL.)	('000 tons)	Value Added (Million TL.)	
1962	34.2	472.6	80.0	244.8	717.4
1963	36.0	497.5	76.0	232.6	730.1
1964	37.6	519.6	78.0	238.7	758.3
1965	39.4	544.5	80.0	244.8	789.3
1966	41.4	572.1	81.0	247.9	820.0
1967	43.0	594.3	83.0	254.0	848.3

FOREIGN EXCHANGE EARNINGS

Tobacco is one of the most important items of Turkey's foreign trade. Foreign exchange earnings from tobacco exports in the plan period are shown below :

Years	Million $
1963	76.0
1964	78.0
1965	80.0
1966	81.0
1967	83.0

TABLE 140 — Distribution of Investments over Years (Million TL.)

Years	Investments	In Foreign Currency	Total
1963	26.0	30.5	60.2
1964	37.4	51.3	92.4
1965	—	26.9	34.4
1966	—	1.9	9.4
1967	—	1.9	9.4
Total	63.4	112.5	205.8

Replacement and maintenance investments are included in the investments given in Table 140. The working capital of expanded or newly erected factories will be augmented and maintenance investments increased in the same ratio.

ANIMAL FEED INDUSTRY

BASIC PRINCIPLES AND METHODS

The development of the feedstuff industry has been planned to keep step with that of animal husbandry.

The feedstuff industry covers the production of the following : various oilcakes; by-products resulting from the processing of cereal; meat, bone and fish meals; molasses, etc.

PRESENT SITUATION

Turkey's feed industry was first established in 1958. 1958 - 1961 consumption figures for industrial feeds are shown below.

TABLE 141 — Consumption of Industrial Feedstuffs

Years	Total Consumption (Thousand Tons)
1958	0.4
1959	3.6
1960	5.6
1961	9.7

Table 142 shows industrial feed production in 1958 - 1961.

TABLE 142 — Production of Industrial Feedstuffs in 1958 - 1961

Years	Production (Thousand Tons)
1958	0.6
1959	3.5
1960	5.8
1961	10.4

FOREIGN TRADE

In previous years, small quantities of industrial feeds were exported to Arab countries. Exports have now stopped, because of increased internal demand.

DEMAND ESTIMATES

Demand is certain to exceed production, if prices are set at reasonable levels and feed utilization is promoted. Demand in the plan period has been assumed to equal production.

PRODUCTION TARGETS

TABLE 143 — Production of Industrial Feeds in the Plan Period **(Thousand Tons)**

Years	Industrial Feedstuffs	Index
1962	16.0	100
1963	18.6	116
1967	88.3	552

By working in cooperation with the dairy industry and the Meat and Fish Organization (Et ve Balık Kurumu) industrial feed plants will come into direct contact with animal breeders, and excess capacity in this industry will thus be eliminated. The reason why the Ankara Factory is the only profit-making concern in the industry is that it sells on credit to producers through the intermediary of the "Atatürk Orman Çiftliği" (Atatürk Forest Farm).

[1] Present idle capacity in the animal feed industry is due to the low purchasing power of animal breeders. In addition, the lack of capital of the Food Industry Corporation makes credit sales impossible. Finally, the habit of using industrial feeds has not yet developed among animal breeders.

The İzmir Factory which started production in 1962 has a capacity of 7,500 tons. When the newly constructed factories of Eskişehir (capacity, 6,000 tons), Bandırma (10,500 tons) and Mersin (7,500 tons) start production at the beginning of 1963, installed capacity will be 70,500 tons.

TABLE 144 — Annual Investments **(Million TL.)**

Years	Foreign Currency	Domestic Currency
1963	—	0.3
1964	1.0	3.3
1965	2.4	6.4
1966	1.4	3.5
1967	—	0.4
TOTAL	**4.8**	**13.9**

These figures include maintainance and replacement expenditures for the 8 factories already in use.

The working capital requirements of the new factories will be around 1 - 1.5 million TL.

VALUE ADDED

It is estimated that the value added per kg. of feed produced in the plan period will be 25 kr.

TABLE 145 — Value Added in the Feed Industry (Million TL.)

Years	Value Added	Index
1962	4.0	100
1963	4.6	116
1967	22.1	552

MEASURES

In view of its high nutritional value, the use of industrial feed will be encouraged. The animal/feed price ratio should be such as to encourage breeders to use industrial feed. In order to increase the number of consumers, promotional activities will be intensified and cooperation will be established between feed producers and dairies.

The internal use of such products as oil and bran, which are at present exported, will be stimulated.

TEXTILE AND CLOTHING INDUSTRY

BASIC PRINCIPLES, TARGETS AND METHODS

The textile industry, one of the oldest in Turkey, is growing rapidly. Since the main raw materials for this industry are supplied internally, it is expected that it will be possible to meet clothing requirements in an adequete manner, after the necessary measures are taken and temporary difficulties are overcome.

Imports of the most important textiles are no longer necessary. On the other hand, the raw cotton and wool which is at present exported without being processed would fetch beter prices if exported as yarn or cloth. This would also have a favourable effect on the balance of payments.

Since, especially in recent years, large factories equipped with new machines have been established, it will not be necessary to increase capacity by establishing large new plants during the firts five-year plan period. Investments will be directed mainly towards improving the quality of textile products and utilizing idle capacity.

In this branch of industry where State enterprises and private firms work side by side, the most productive use of the establishments of State enterprises will be ensured by measures designed to improve quality, lower costs and by the revision of programming techniques.

The raw materials and auxiliary goods which have to be imported will, if necessay, be distributed according to an assesment of needs. Beside this, special attention will be paid to preventing price fluctuations in domestic raw materials.

In order to benefit from the productivity of large units and promote the best use of resources, measures will taken to encourage mergers among small enterprises, and all efforts in this direction will be supported.

PRESENT SITUATION

a. Units of production and workers employed :

In 1959, there were nearly 6,000 production units and about 216,000 workers in the textile industry. Larger production units, which use more than 10 HP motive power or employ more than 10 workers, constitute 17 per cent of all production units in this field. About 47 per cent of textile workers are employed by these larger production units.

In the 25 production units, which are public enterprises and constitute only, 0.4 per cent of the total number of work places, there are 34,000 workers accounting for 16 per cent of all workers in this branch of industry. 87 per cent of the State production units can be defined as large production units. 84 per cent of the workers in State textile enterprises are employed in large production units.

It is estimated that there are about 33,500 production units and 76,000 workers in the clothing industry. There are 8 State enterprises employing 15,300 workers in this field.

b. Production Capacity

Production prospects in the main manifacturing branches of the textile industry are indicated below :

TABLE 146 — Production Capacity in the Cotton and Woollen Industry

Fibre	**Yarn**		**Fabric**		
	Number of Spindles	**Manifacturing Capacity '000 tons/year**	**Number of Weaving looms**	**Manifacturing Capacity**	
				Million Meter/year	**'000 Tons/ Year**
Cotton	761 120	98.7	15 820	554.0	66.5
Wool	227 760	39.0	5 300	94.2	61.5

The table shows the relationship between yarn, and cloth manufacturing capacity. As appropriate, capacity in the case of cotton yarn is larger than weaving capacity. The contrary is true for wool where weaving capacity is far in excess of yarn capacity. Wool yarn capacity should be higher than weaving capacity since, as in the case of cotton yarn, there are various other utilizations of wool yarn such as for carpets, rugs, knitting wool etc.

29 per cent of weaving looms and 28 per cent of spindles in the cotton industry are in the Sümerbank textile mills. In addition, the Sümerbank has a share in enterprises which account for 11 per cent of yarn capacity and 9 per cent of cloth capacity in the cotton industry.

About 23 per cent of the spindles in the woollen industry and 43 per cent of the weaving looms installed in factories are in State mills. However, since only 24 per cent of weaving looms are in factories and the rest are scattered among small work places the Sümerbank owns in reality about 10 per cent of total wool-weaving looms.

c. Production

Table 147 gives global production figures for 1960, the latest year for which data is available.

TABLE 147 — Cotton and Wool Production, 1960.

Fibres	Yarn '000 tons	Fabric Million Meters	 '000 tons
Cotton	92.8	527.1	63.2
Wool	12.3	9.6	6.5

It is seen that in 1960, 94 per cent of production capacity in the cotton yarn industry and 95 per cent of production capacity in the cotton weaving industry were utilized. in the woollen industry the percentage of capacity utilization was 32 for yarn and 10 for fabric.

In 1960, 30 per cent of the total production of both cotton yarn and cotton cloth was produced in the Sümerbank factories. Sümerbank factories. Sümerbank production of woollen yarn accounted for 33 per cent, and of woollen fabric about 56 per cent, of the total.

d. Consumption

Estimates of yearly per capita consumption are as follows : cotton cloth 4 200 gr.; wollen cloth, 1.200 gr.; artificial fibres (synthetic and semi-synthetic), 135 gr. The figures include clothing as well as the fibre used for making mattresses, quilts, pillows, upholstery and drapery materials. Stocks are not included.

DEMAND PROJECTIONS

Estimated consumption levels for the main fibrous textiles in coming years are given in Table 148.

TABLE 148 — Estimates of Fibre Consumption

	Cotton			Woollen			Artificial		
	Grams per person	Total '000 tons	Total Index	Grams per person	Total '000 tons	Total Index	Grams per person	Total '000 tons	Total Index
1962	4 200	123.4	100.0	1 200	35.3	100.0	135	4.0	100.0
1963	4 250	128.4	104.0	1 200	36.5	100.0	140	4.5	113.5
1967	4 740	160.0	130.0	1 125	40.0	113.3	190	6.4	161.2

The above figures were estimated on the basis of the relationship between per capita GNP and per capita consumption in 1951 - 60.

It is estimated that per capita consumption of cotton and arificial fibre products will increase, while there will be a decrease in the consumption of woollen products. However, there will not be any decrease in total per capita consumption of fibre products as the decrease in the consumption of woolen products will be compensated by the increase in the consumption of artifical fibres.

PRODUCTION TARGETS

It was not attempted to set separate production targets even for the chief products because of the particular conditions of the industry and also because sufficient data could not be obtained. The results of studies on estimated developments in this industry in the plan period, made on the basis of previous statistical inquiries, and the broad assumptions on which these studies rest are summarized below.

The large establishments which give regular information to the General Directorate of Statistics represent about 80 per cent of total establishments in this industry.

The relation between production costs and production inputs in the last ten years was also taken into consideration in estimating production levels. It was assumed that cost prices would go down in the next few years with the merging of small and scattered establishments, the increased productivity of labor and equipment, and the re-organization of marketing services. However, the total value of the goods manufactured may possible increase as a result of the additional investments to be made for renovation, for improving quality and for manufacturing new varieties which are not produced now. Production and sale values were therefore accordingly revised and the estimates arrived at are shown, together with value added estimates calculated on the same basis, in Table 149.

TABLE 149 — Estimates of Economic Activities in Textile and Clothing Industry

Years	Value of Production Million TL.	Value of Production Index	Value Added Million TL.	Value Added Index
1962	5 270	100.0	2 110	100.0
1963	5 640	107.0	2 260	107.0
1967	7 380	140.0	2 950	140.0

VALUE ADDED

The above relationships were also taken into consideration in estimating value added in this industry. The cost of inputs of raw materials, other ingredients, and power was assumed to account for 60 per cent of the average value of production and the corresponding adjustments were made.

INVESTMENTS

It is obviously very difficult to estimate the investment requirements of an industry for which no inventory has been previously prepared. Investment requirements were therefore assessed in the light of demand estimates, and of the indications given by experts and professional organizations in this branch of industry.

TABLE 150 — Investments in Textile and Clothing Industry (Million TL.)

Years	Investments
1963	80
1964	160
1965	190
1966	220
1967	260
Total	**910**

Information in hand indicates that sizeable investments have been made up to now in this industry. However, these investments were not consistent with a sound development policy and balanced development could not be achieved. Bottlenecks occurred while idle capacity reaching considerable levels existed in some establishments. It is now necessary to make new investments to meet growing demand, to replace worn-out machinery and equipment in obsolecent plants, and at the same time to assure utilization of idle capacity, eliminate gaps and improve quality.

The investment estimates given in Table 150 are based on the above considerations and on the pre-project studies of the public and private sectors.

MEASURES

The basic measures to be taken to make full use of production facilities and increase productivity are summarized below :

a. An extensive inventory of the industry will be made.

b. A study group will be established in the Sümerbank, to follow developments in the textile and clothing industry in and outside Turkey and appraise the information gathered.

c. Legal measures will be taken to facilitate the merging of small and scattered establishments into economical units and the establishment of producer cooperatives. Establishments which have merged and are viable, and developing concern should be provided with various credit facilities to meet their capital requirements.

d. Norms and standard regulations will be prepared for the main manufactures in the textile and clothing industry. This should end wastage due to quality and manufacturing defects which are now a cause of complaint on the part of consumers. Control agencies responsible for the enforcement of these standard will be given wider powers.

e. Short and long-term on-the-job training courses will be provided for workers to increase their skill and experience and thus raise productivity.

PAPER INDUSTRY

BASIC PRINCIPLES AND METHODS

a. The demand for paper was estimated on the basis of the relation between paper consumption in recent years (at 1961 constant prices) and GNP; demand projestions were based on the income elasticity of demand.

b. Paper consumption is closely related to the development of communities. The development of this industry in the next few years is expected to be parallel to that of the country.

c. The main principle in the expansion of the paper industry is to meet the large import requirements of this industry from domestic sources, if this can be achieved under sound economic conditions.

PRESENT SITUATION

a. A modern paper industry was first established in İzmit in 1934. The İzmit Paper Mills were attached to the Sümerbank until 1955, at which date they were set up as an independant State Economic Enterprise - The General Directorate of Cellulose and Paper Factories (SEKA) - under the supervision of the Ministry of Industry. With the extension made in 1962, these factories will have a production capacity of 100,000 tons of various kinds of paper and pasteboard in the plan period. Besides SEKA, there are 7 private plants with a total yearly capacity of about 10,000 tons of rough wrapping paper and paperboard based on straw. These establishments which are technologically very backward generally use old paper as raw materials, and the rough wrapping paper they produce is not suitable from a sanitary point of view for wrapping food in.

b. Production capacity in 1960 was 63,900 tons. Production in the same year amounted to 63,650 tons of paper and imports to 26,000 tons. The foreign exchange equivalent of 41.7 million TL. was spent on imports.

DEMAND ESTIMATES

Both total demand and demand for different varieties of paper is expected to increase in the plan period. Demand for the different kinds of paper and aggregate demand are shown in Table 151.

TABLE 151 — Breakdown of total Paper Demand (Thousand Tons)

	1962	1963	1967	1967 Index (1962=100)
Printing paper	26.4	30.1	47.2	179
Newsprint	24.3	27.5	42.0	173
Wrapping paper	42.9	47.6	65.6	130
Paperboard	26.4	29.8	45.2	175
Total paper demand	**120,0**	**135.0**	**200.0**	**167**

PRODUCTION TARGETS

Capital-output ratio in this industry is high. This will halt large-scale development in the first five-year plan period. The studies which have been made to date show that production costs for various kinds of papers are high in newly established factories. Domestic tree species will have to be studied in detail and production techniques for new factories will have to be determined in the light of these studies. Since results are still forthcoming, it has not been possible to determine the exact production method to be used in the factories which will be established shortly.

TABLE 152 — Production (Thousand Tons)

Years	1962	1963	1967	Index
Production	101.1	120.6	145.6	141

Since it takes three to four years to establish a paper mill, the first factory to be set up in the plan period will not start to operate before the beginning of 1967.

INVESTMENTS

Investments in the paper industry will begin in 1964 after studies and projects are completed in 1963. Proposed investments for this industry are shown in Table 153.

TABLE 153 — Investments in Paper Industry (Million TL.)

Years	Investments	Foreign Exhange Requirements
1963	10.0	4.0
1964	100.0	51.5
1965	140.0	65.5
1966	165.0	81.0
1967	138.0	76.0
TOTAL	**553.0**	**278.0**

Note: Foreign Exhange requirements represent machinery and equipment imports.

IMPORTS

Imports to cover the gap between demand estimated and production targets are shown in Table 154.

TABLE 154 — Total Paper Import

Years	Total paper demand (Thousand Tons)	Domestic Production (Thousand Tons)	Import (Thousand Tons)	Import Million TL.
1962	120.0	101.1	18.9	32.2
1963	135.0	120.6	14.4	21.3
1964	150.0	120.6	28.4	46.5
1965	165.0	120.6	44.4	71.7
1966	185.0	120.6	64.4	104.9
1967	200.0	145.6	54.4	94.6

The factory which will start production in 1967 will provide an import substitution of 78.4 million TL.

VALUE ADDED

The value added by the paper industry to national income in 1962-1967 is shown in Table 155. There will be a noticeable increase when the İzmit Paper Mill is expanded in 1963 and its new cellulose and paper plant starts production in 1967.

TABLE 155 — Value Added in Paper Industry (Million TL.)

Years	Value Added by Present Production	Value Added by New Production	Total
1962	76.1	—	76.1
1963	76.1	16.3	92.4
1967	76.1	59.3	125.4

MEASURES

a. The main raw material for paper is wood and it represents practically 50-60 per cent of production cost. In an effort to support the peasants, the Forestry Department is now keeping log prices at a high level. Appropriate measures will eventually be taken in this matter.

b. The possibility of applying new processing methods, permitting high cellulose yields, to domestic timber, and of setting up new factories according to the most up-to-date and suitable techniques must be studied. The Cellulose and Paper Industry (SEKA) and the Foresty Department will conduct these studies jointly.

c. The inventory of domestic tree species which are suitable for use by the paper industry will soon be completed and the respective amounts which can be allocated yearly to the paper industry will be fixed. The studies undertaken in this connection by the General Directorate of Forestry will be accelerated.

d. The production methods which will be applied in the new factories must be chosen so as to lower costs and lead to favorable comparative cost evaluations. Trees which grow rapidly (poplars, willows) or trees which the country possesses in abundance (beech trees) will be used as far as possible as raw materials.

e. In order to accelerate the completion of investments for which foreign exchange is required, priority will be given to the construction of the parts that can be made in Turkey.

f. Measures to decrease production costs and improve quality in the paper industry will be taken.

RUBBER INDUSTRY

METHODS

a. Three groups of activities are distinguished in this industry :

(1) rubber footwear, (2) rubber tires, and (3) other rubber products.

b. The demand for rubber footwear is estimated on the basis of per capita consumption. The demand for rubber tires has been estimated according to the increase in vehicles and after deducting the number of tires to be recapped. The demand for other articles could not be estimated.

PRESENT SITUATION

a. Of the 394 establishments in the rubber industry, only 196 were in operation in 1959. Most of these establishments are extremely small production units functioning with primitive methods 75 per cent of their production consist of articles of apparel.

b. In addition to above outfits, three rubber tire plants in which sizeable foreign capital has been invested, are under construction. These plants will have a total capacity of 460,000 tires and tubes in 1964. Until early 1963, the demand for tires was met through imports. Imports in 1960 and 1961 amounted to 21.3 million and 6.9 million dollars respectively.

c. The present capacity of this industry is of 2.4 milion pairs of rubber shoes and of 6.6 tons of various other rubber products. Output in 1959 amounted to only 58.6 per cent of this capacity with 14 million pairs of shoes and 5.4 tons of other products. Raw rubber imports for this industry amounted to 4.2 million dollars in 1960 and 3 million dollars in 1961.

DEMAND ESTIMATES

a. Demand forecasts for rubber footwear are shown in Table 156.

TABLE 156 — Demand for Rubber Footwear

	1962	1963	1967
Number of shoes (Million Pairs)	15.6	16.0	17.9
Value (Million TL)	140.0	144.0	161.0

b. Rubber tire demand in the 1962-1967 period will rise considera bly as shown in Table 157.

TABLE 157 — Rubber Tire Demand (Thousand Units)

	1962	1963	1967
Total rubber tire demand	542.2	535.6	645.5
Automobile tires	46.1	48.1	61.0
Truck-Bus tires	405.8	408.9	498.7
Troctor tires	72.4	78.6	86.1

PRODUCTION TARGETS AND INVESTMENTS

a. Large investments will not be necessary in this branch of industry during the plan period since capacity in rubber wear products can fully meet demand in the period 1963-1967. Investments will be necessary only in order to modernize existing establishments and improve quality. Small and scattered production units should be merged into larger concerns to assure more economical operation.

b. Two of the rubber tire plants under construction will be completed and begin production early in 1963. They will have a total annual capacity of 270,000 tires and tubes. The third factory, which will have a capacity of 190,000 tubes and tires, will start to operate at the beginning of 1964.

Extensions will be made in two of these factories in order to increase total capacity in the plan period by an additional number of 90,000 tubes and tires. Automobile and truck tires and tubes will be manufactured in these extensions, of which one is expected to start production in 1966 and the other in 1967. Surpluses for export will be available from the production of these plants.

However, the capacity of the factories mentioned above will not meet the demand for tractor, truck and bus tires in the next five years. Therefore, it will be necessary to establish another plant, with a capacity of 200,000 truck and bus tires, and 90,000 tractor tires, which will start production at the beginning of 1966.

c. 1963-1967 production targets are shown in Table 158 and related investments in Table 159.

TABLE 158 — 1963 - 1967 Production Targets in Rubber Industry (Thousand Units)

Years	Automobile Tires	Truck-Bus Tires	Troctor Tires
1963	78.2	143.7	7.5
1964	147.4	249.0	8.0
1965	160.4	271.6	9.0
1966	176.5	470.0	77.0
1967	194.0	517.0	81.0

TABLE 159 — 1963 - 1967 Investments (Million TL.)

	Total	In Foreign Exhange
1963	40.6	28.0
1964	83.0	50.0
1965	91.0	55.0
1966	22.0	13.0
1967	12.0	7.0
Total	**254.0**	**153.0**

FOREIGN TRADE

a. Imports

(1) Raw Materials

The Raw materials of the rubber industry which are raw rubber and carbon black (*) are imported. Table 160 shows total raw material import requirements in the coming five years.

TABLE 160 — Raw Material Import Requirements in Rubber Industry (Million TL.)

Years	Import Value
1962	30.0
1963	78.2
1964	130.6
1965	140.3
1966	206.7
1967	224.1

(2) Finished Products

Since production capacity will not meet the demand for truck-bus and tractor tires in the first-year period, imports of finished products will have to take. Import requirements in truck-bus and tractor tires are shown in Table 161.

TABLE 161 — Tire Imports

Years	Truck-Bus Tires (Thousand Units)	Tractor Tires (Thousand Units)	Total Import Value (**) (Million TL.)
1962	405.8	72.4	
1963	264.9	71.1	150.2
1964	260.8	74.7	149.8
1965	242.9	74.5	141.9
1966	—	—	—
1967	—	—	—

(*) Carbon Black will be produced in Turkey after 1966.

(**) Average CIF prices of trucks-bus tires and tractor tires are assumed to be 460 TL. and 400 TL. respectively.

b. Exports

It will be possible to export a certain number of rubber tires in the plan period. The capacity of the three factories under construction will be excess of domestic demand in the case of automobile tires. It will also be possible to export truck tire surpluses after the truck and bus tire factory has started production in 1966. Export estimates for the 1963-1967 period are given in Table 162.

TABLE 162 — Tire Exports

Years	Automobile Tires (Thousand Units)	Truck-Bus Tires (Thousand Units)	Total Export Value(*) (Million TL.)
1962	—	—	—
1963	25.0	—	5.0
1964	90.0	—	18.0
1965	100.0	—	20.0
1966	110.0	—	22.0
1967	107.0	20.0	29.0

c. Import Substitution

Past investments in the rubber tire industry will ensure a sizeable import substitution in the five-year period. The annual value of this imports substitution is shown in Table 163.

TABLE 163 — Value of Import Substitution in the Rubber Tire Industry (Million TL.)

Years	Establishments under construction	Establishments to be constructed or extended	Total
1963	81.1	—	81.1
1964	130.2	—	130.2
1965	141.6	—	141.6
1966	147.9	109.5	257.4
1967	149.1	129.9	279.0

VALUE ADDED

Value added by the rubber industry (Table 164) will increase considerably with the entry in operation in the plan period of the new rubber tire plants.

TABLE 164 — Value Added in Rubber Industry

Years	Rubber Tire Industry		Rubber Wears and other Industries		Total	
	Value Added (Million TL.)	Index	Value Added (Million TL.)	Index	Value Added (Million TL.)	Index
1962			85.6	100	85.6	100
1963	101.2	100	87.8	103	189.0	221
1964	153.7	152	90.6	106	244.3	285
1965	168.3	166	92.8	108	261.1	305
1966	256.2	253	95.5	112	351.7	411
1967	272.6	269	98.3	115	370.9	433

(*) Export prices for automobile tires and turck tires are assumed to be 200 TL. and 400 TL. respectivey.

PLASTIC PROCESSING INDUSTRY

BASIC PRINCIPLES AND METHODS

The goal is to develop the plastic processing industry in line with domestic raw material availabilities and raw material import possibilities. Although a plastic raw material industry has not yet been established in the country, there are various workshops equipped with molding machines which process imported raw material. Today, 24,000 tons of plastic can be processed annually. But, since raw material imports are subject to various restrictions and fields of utilization of plastics are still limited, processing is far below actual capacity and can be related to the amount of raw material imports.

On the other hand, world production in plastics has been increasing rapidly due to continual research in this field, which has made it possible to substitute plastics on a growing scale for certain scarce materials and to manifacture plastic elements that are relatively cheap or have certain inherent superior characteristics. Parallel to this, studies of the primary and secondary elements which are essential in the production of plastic materials were undertaken in Turkey and showed that various plastic materials could be produced internally. The problem is not one of production capacity alone. As plastics have a wide range of utilization, processing outfits must be developed at the same pace as fields of utilization and equipped according to the types to be manufactured. Therefore it is necessary to know in what form the plastics to be produced are expected to be used.

PRESENT SITUATION AND DEMAND ESTIMATES

a. The production value of the finished products obtained from processing various plastics totalled 220 million TL. in 1961 and the value added in the same year amounted to 121 million TL.

b. Plastics for which demand appears to be high are shown in Table 165.

TABLE 165 — Demand Estimates **(Thousand Tons)**

	1962	1963	1967	1967 Index (1962=100)
Phenyl Formaldehyde	9.2	11.1	20.0	217
Vinly Plastics	7.2	9.0	20.0	278
Polyethylene	3.5	4.0	8.0	229
Polystyrene	4.6	5.0	7.0	152
Celluliod Acetate	5.1	5.5	7.5	167

PRODUCTION TARGETS

Although, the present capacity of plastic processing facilities appears, with 24,000 tons per year, to be at the required level for processing imported plastics (until plastic materials can be produced internally), the fact certain minor changes will be necessary, according to production types, in the machinery and equipment used, together with the fact that plastics are grouped together in foreign trade statistics, makes it difficult to reflect the situation exactly. If however, total import quantities are broken down by fields of utilization and capacities are determined in this way, it is seen that, with minor additions, a plastic processing industry which will do away with the need for imports can be set up and that basic investments will be necessary in the fields in which raw material production capacity will be established.

Assuming that imports will develop at their present rate until the stage of internal production is reached, production values by years will be as shown in Table 166.

TABLE 166 — Value of Plastic Production (Million TL.)

Production of	1963	1964	1965	1966	1967
Existing Establishments	260	290	330	360	400
New Establishments	—	10	30	380	410
T O T A L	**260**	**300**	**360**	**740**	**810**

TABLE 167 — Value of Plastic Raw Material Imports (Million TL.)

Imports of	1963	1964	1965	1966	1967
Existing Establishments	92	102	116	70	24
New Establishments	—	4	11	6	5
T O T A L	**92**	**106**	**127**	**76**	**29**

INVESTMENTS

Investments of 95 million TL., of which 60 million TL. will be in foreign exchange will have to be made. Investments by years are shown in Table 168.

TABLE 168 — Fixed Investments in Plastic Industry (Million TL.)

Investments in	1963	1964	1965	1966	1967
Domestic Currency	1	3	16	13	2
Foreign Currency	2	6	30	18	4
T O T A L	**3**	**9**	**46**	**31**	**6**

The new plants to be established and the existing plants will process the plastic raw material that will be produced by the chemical industry.

VALUE ADDED

Value added by years is shown in Table 169.

TABLE 169 — Value Added (Million TL.)

Value added by	1962	1963	1967
Existing Establishments	121.0	143.0	220.0
New Establishments	—	—	225.5
T O T A L	**121.0**	**143.0**	**445.5**

MEASURES

a. As the plastic industry uses a great deal of energy, it must have access to cheap sources of energy. Installed capacity in plastic industry is mainly located in İstanbul. In the studies to be undertaken in connection with the establishments of new raw material producing and consuming plants the matter of energy supply must also be considered.

b. Investments must be adjusted to the development of the plastic material industry so as not to create excess capacity.

c. Possibilities for manufacturing plastic processing equipment in Turkey must be investigated.

d. As the manufacture of large-size parts will enchance the value of plastic; it will be necessary to consider this aspect of the development of plastic industry and to provide investments in foreign currency to this effect.

CHEMICAL INDUSTRY

BASIC PRINCIPLES AND METHODS

The demand for chemical products has increased rapidly with the development of agriculture and industry. Since the chemical industry in Turkey still consists of small-scale establishment, the rise in demand leads to larger import requirements. Imports could be reduced substantially with the establishment of an adeque chemical industry. Sources of raw material for this industry exist in Turkey. Expanding demand makes it possible to establish plants of economic size.

These factors were taken into consideration in determining the directions of development of the chemical industry.

A given product can be produced in various ways in the chemical industry. Different raw and auxiliary materials, machinery and equipment will be selected according to the method of production applied. For this reason, planning in the chemical industry requires wider studies and is of greater importance than in other branches of industry.

Establishment applying different production methods are of different optimum size. Therefore, the size of establishments must be determined in relation to the method of production used.

The chemical industry has an extremely wide range of products. In view of the different fieds of utilization of these products and of the different kinds of demand they fulfil, separate methods had to be used for each group of products in order to determine demand. The procedure followed is outlined below.

Inorganic acids, sodium chloride, soda ash, sodium hydroxide are the main chemical elements. The demand for these was estimated with reference to their widespread use in many industry branches and the development expected in many fields.

The demand for consumer goods such as soap and alcohol was estimated on the basis of the relation between per capita income and total consumption (imports + domestic production). The figures obtained were checked by comparing them to figures in foreign countries.

Plastics is a general term given to a large variety of products. The demand for plastics was estimated to develop in step with the developments envisaged in all sectors.

The demand for pesticides and other agricultural specialities was determined on the basis of present consumption figures, although research in this fields results in the continual introduction of new products on the market. Demand forecasts based on the above considerations are given in Table 170. The production capacity which will meet this demand is considered under production targets.

PRESENT SITUATION

The total value of the production of chemicals in 1962 is estimated at 1,130 million TL. and value added in the same year at approximately 365 million TL.

The value of imports in 1961 amounted to 700 million TL. If import restrictions and barriers did not exist, this figure would easily rise to the level of the production value mentioned above.

The private sector accounts for around 70 per cent of the production value of the chemical industry. The production of the private sector is mostly directed toward consumer goods. In many of these establishments there is considerable idle capacity. The capacity of outfits producing semi-finished and auxiliary products is below the required size.

Chemical establishments in the public sector require larger investments. The State Economic Enterprises have recently made investments in the field of chemical production, with a view to obtaining the products necessary for their own operation, or of promoting their own by-products. The cost price of the goods produced by the recently established Nitrogen Industry is however, for various reasons, twice as high as the normal.

DEMAND PROJECTIONS

The factors which were taken into account in making demand projections have been mentioned above. Demand for the main chemical products is shown in Table 170.

TABLE 170 — Demand Projections

Product	Demands Levels (Thousand Tons/Year) 1962	1963	1967	1967 Index (1962=100)
Soda	26.0	31.0	69.0	265
Sodium hydroxide	25.0	28.0	41.0	164
Chlorine	2.0	3.5	25.0	1 250
Salt	550.0	565.0	800.0	145
Sulphate acids	80.0	85.0	345.0	430
Superphosphate (18 %)	170.0	277.0	765.0	450
Nitrogenous Fertilizer (20 %)	140.0	168.2	462.4	330
Semi-synthetic Fibers	6.3	6.6	8.3	132
Cellulose Acetate	5.1	5.5	8.5	167
Acetic Acid Anhydrites	0.2	0.3	10.4	5 200
Acetic Acid	1.0	1.2	14.8	1 480
Acetaldehyde	0.0	0.0	11.6	100(1967=100)
Nylon (or Perlon)	1.5	1.6	2.0	133
Polyvinil chlorure	7.2	9.0	20.0	278
Phenol Form. Pl.	9.2	11.1	20.0	217
Formaldehyde (37 %)	0.2	0.2	8.7	4 350
Methyl Alcohol	0.1	0.1	7.0	7 000
Phenol	0.1	0.1	20.7	20 700
D. D. T.	8.8	8.8	8.8	100
Chloral	0.0	0.0	3.7	100(1965=100)
Chlorbenzene	0.0	0.0	7.3	100(1965=100)
Gamma BHC (15 %)	6.3	6.3	6.3	100
Copper Sulphate	4.5	4.5	4.5	100
Trichlorethylene	1.5	1.7	2.9	193
Acetylene	1.5	1.6	20.0	1 333
Matches (1 000 cases)	115.0	119.0	140.0	122
Nitrogenous Dyes	0.4	0.4	0.5	125
Sulphur black	0.9	1.0	1.5	167
Colored Sulphur Dyes	0.2	0.2	0.4	200
Carbon black	4.0	4.5	6.5	162
Soap	65.0	69.0	95.0	151
Ethyl alcohol (Million liters)	19.0	20.0	28.0	147
Plastifying substance	6.1	7.2	14.2	233
Tartaric acid	0.4	0.5	1.0	250
Citric acid	0.2	0.2	0.5	250
Aluminum sulphate	5.0	7.0	11.0	220
Potassium Fertilizers (50 %)	15.0	21.6	36.0	240
Sodium Sulphur	1.2	1.3	2.5	208
Calcium hypochloride	1.5	2.0	4.5	300
Carbon sulphur	1.0	1.2	2.7	270
Naphthalene	1.2	1.2	2.5	250
Tensio-Active Substances	2.5	3.0	7.0	280

As pharmaceuticals are constantly being replaced by new ones and a certain number fall out of use, the demand for pharmaceuticals could not be projected.

PRODUCTION TARGETS

Targets in the chemical industry in the first five-year plan period are the following :

a. A basic chemical industry will be established.

b. The fertilizers and agricultural specialities required for modern farming will be produced in the country.

c. Internal production will cover the consumption of the artificial fibres used for clothing purposes.

d. The different plastics which will be in great demand as planned development proceeds will be obtained from the wide variety of refinery products.

e. Imported products which require considerable outlays of foreign exchange will be produced internally.

These industries will also make it possible to produce certain additional products and to obtain certain by-products.

Table 171 shows the estimated value of the annual production of existing factories and of the new plants to be set up.

TABLE 171 — Value of Production in Chemical Industry **(Million TL.)**

Production of	**1962**	**1963**	**1967**	**1967 Index (1962=100)**
Existing Establishments	1 130.0	1 290.0	1 622.0	
New Establishments	0.0	20.0	742.0	
TOTAL	**1 130.0**	**1 310.0**	**2 364.0**	**209**

The raw material import requirements of these factories are shown in Table 172.

TABLE 172 — Value of Raw Material Import Requirements in Chemical Industry **(Million TL.)**

Imports by	**1962**	**1963**	**1967**	**1967 Index (1962=100)**
Existing Establishments	290.0	330.0	240.0	
New Establishments	0.0	5.0	190.0	
TOTAL	**290.0**	**335.0**	**430.0**	**148**

With increased production from existing plants and the output of new plants, the value of the import-replacing commodities to be produced internally in the period 1963-1967 will be in excess of the1961 figures by the following amounts :

1963	80 Million TL.
1964	125 Million TL.
1965	170 Million TL.
1966	535 Million TL.
1967	775 Million TL.

INVESTMENTS

Fixed investments to be made in the plan period in order to attain production targets will amount to some 2 735 million TL., of which approximately 1 745 million TL. will have to be in foreign exchange.

Table 173 shows the annual values of the projected fixed investments.

TABLE 173 — Fixed Investments in Chemical Industry (Million TL.)

Investments	1963	1964	1965	1966	1967
Domestic currency	56	201	304	294	135
Foreign currency	46.0	367.0	555.0	537.0	240.0
TOTAL	**102.0**	**568.0**	**859.0**	**831.0**	**375.0**

As a result of the above investment it is expected to be able to produce the following additional quantities of chemicals at the end of the five-year period:

	Tons/Year
Soda	60 000
Sodium hydroxide (existing capacity 2,200 tons/year)	40 000
Chlorine (existing capacity 2 000 tons/year)	22 000
Sulphate acids (existing total capacity 85 000 tons/year)	300 000
Superphosphates (existing total capacity 260 000 tons/year)	600 000
Nitrogenous fertilisers containing 20 % nitrogen (existing capacity 115 000 tons/year)	440 000
D.D.T. (chloral and chlorbenzene producing establishments included)	3 000
Gamma-BHC (15 %)	3 000
Polyvinil chlorure	20 000
Phenol-formaldehyde plastics (including complete phenol, methly alcohol and formaldehyde set-ups)	20 000
Copper sulphate (existing total capacity 1 500 tons/year)	3 000
Rayon and Viscon, produced with viscose (existing capacity 1 200 tons/year)	3 000
Acetate silk	1 000
Cellulose acetate (including acetic acid anhydride)	8 500
Acetic acid (including acetic aldehyde facilities)	13 500
Nylon 6 or Nylon 66	2 000
Trichlorethylene	2 900
Various textile dyes	2 300
Acetylene	25 000
Plastifying substances	10 000
Tartaric acid	1 500
Salt (present production 580 000 tons/year)	350 000

VALUE ADDED

The value added to be created by existing and new establishments is shown in Table 174.

TABLE 174 — Value Added in Chemical Industry (Million TL.)

Value added by	1962	1963	1967	1967 Index (1962=100)
Existing Establishments	365.0	423.0	560.0	
New Establishments	0.0	5.0	304.0	
T O T A L	**365.0**	**428.0**	**864.0**	**236**

MEASURES

The measures to be applied in the chemical industry and the general or specific problems of this industry which will have to be solved in order to realize the 1963-67 and longer term investments are outlined below :

a. General Measures

(1) Competition in the international market is based on extensive research. The way to economic undertakings in this field is to study the newest methods of production applied and to invest in the most suitable of these. The methods selected for the new plants to be set up must therefore be reviewed once more in the light of latest developments. This point will be taken up in the final evaluation of projects.

(2) The location of factories must be selected after thorough study. Here the following conditions must all be fulfilled : availability of raw and auxiliary material, of energy and fuel, and transport facilities. These factors will influence production costs. Therefore, location is more important in this sector than in others.

(3) The incidence of expenditure taxes on more than one of the cost items of a same product will be stopped.

(4) Commodities which are produced internally and satisfy requirements as regards both quality, should not be imported. Emphasis should, however, be given to quality and the Turkish Standards Institute should also issue regulations in this field.

(5) The proper functioning of establisthments depends on the availibility of qualified personnel. For this reason, education in chemical engineering should be organized and developed to take into account the requirements of an up-to-date industry. The chemical engineering departments of universities in Turkey are handicapped by lack of equipment; large-scale investments are needed to train both sufficient scientists and engineers and engage in the field of scientific research. The number of technical chemistry institutes giving the training required by a modern chemical industry will be increased.

(6) The possibility of setting up a Chemical Applied Research Institute will be examined. This institute will help to solve the problems arising in various fields as the industry develops and will investigate new possitibilities.

(7) The possibility must be explored of benefiting from foreign capital in the chemical industry, as distinct from foreign investment in the pharmaceutical industry, which is subject to the specific conditions mentioned below.

(8) As the establishment of some of the factories included in the investments program will require heavy foreign exchange expenditure, full use should be made of existing possibilities of producing investment goods in the country and of the existing production facilities and engineering personnel.

b. Specific Measures

(1) The possibility of producing soda in association with the glass or a second nitrogen industry will be investigated.

(2) Since acid sulphate can be largely used in producing superphosphate fertilizers, these two industries will be planned together, and will be suitably located.

(3) Imports of phosphorite will increase with increased demand for superphosphate. It will therefore be of importance to find indigenous sources of phosproite and this will be given priority by the Mining Research and Prospecting Institute.

(4) Finding potassium minerals in Turkey will be of importance for the production of potassium fertilizers and compounds. The Mining Research and Prospecting Institute should also be active in this field.

(5) Attention will be given to factors which raise the production cost of nitrogenous fertilizers. Developing the Kütahya factories would both increase production and decrease costs but the production methods to be applied in this connection will have to be studied in detail.

(6) Monopoly regulations which prohitbit the use of ethyl alcohol for industrial purposes will be revised and the matter examined in cooperation with the Sugar Factories, so that the needs of modern industry can be met without reducing monopoly revenues. The yield of alcohol production from molasses will be improved and the by-products obtained in the stage of processing will be recovered and used for other purposes.

(7) Foreign capital in the pharmaceutical industry will be authorized if one of the active substances entering in pharmaceuticals is synthesized in Turkey. If not based on synthesis, the manufacture of foreign pharmaceuticals in Turkey will not be allowed to expand.

(8) The control of drugs by the Ministry of Health and Social Affairs is inadequate. The responsible services of the Ministry will be re-organized and supplied with the necessary laboratories, equipment and personnel to meet needs.

(9) If necessary, the drug licenses given by the Ministry of Health and Social Affairs will be withdrawn, and the manufacture of drugs which are ascertained to be of low medicial value will be stopped.

(10) Full utilization of the products of operating refineries will be possible with the progress of petro-chemistry. An adequate petro-chemical industry should be established after a close study of present refineries and of the different production methods and products.

(11) The quantity of aromatics produced from the distillation of coal is not sufficient to meet demand. Consideration will be given to producing aromatics from petroleum.

BAKED CLAY CONSTRUCTION MATERIALS INDUSTRY

BASIC PRINCIPLES AND METHODS

This branch of industry was studied under two heads : (1) fire clay and firebricks and (2) ordinary bricks and tiles.

The demand for these products which are used as inputs in other industries, was estimated with reference to the demand anticipated in the industries concerned.

PRESENT SITUATION

The private and public sector are both active in the refractory brick industry. The largest unit is the Filyos Refractory Brick Factory which belongs to the Sümerbank and which has a capacity of 28,8 thousand tons. Other plants are: a few manufacturing units in İstanbul, each with a capacity not exceeding 2,000 tons; one in the Aegean (1 600 tons), one in Eskişehir (800 tons), and the Çanakkale Ceramic Factory (1 600 tons). Total firebrick capacity is about 35,000 tons.

The output and sales figures of the above factories are known. The Filyos Factory operated at full capacity in 1958 and 1959 and sold most of its products. The various types of bricks manufactured by the Filyos Factory (chamotte, silica, insulating and acid bricks) cover requirements and imports of these are nil or negligible (40 tons).

Magnesite and chrome-magnesite bricks are not manufactured in the Filyos Factory and have to be imported. The factory is now being expanded to produce these types as well. When this expansion is completed in 1964, imports of these bricks should no longer be necessary.

Ordinary bricks and tiles are manufactured all over Turkey (except in the South East and East), either in factories (pressed bricks) or in brick kilns. Production is sufficient to meet demand and imports are negligible. It has not been possible to compile production and capacity figures.

DEMAND

At present, requirements in chamotte and silica bricks are met wholly by domestic production. The quality of home-produced bricks is below that of imported products and if quality were improved, the demand for imported products would diminish. Present capacity is sufficient to meet the rise in demand in the next few years.

Magnesite brick requirements will amount to about 15 000 tons by 1966-1967. The new plant which is now being constructed will be able to supply these quantities.

The estimated demand for bricks, as derived from demand estimates in the construction sector, is shown in Table 175.

TABLE 175 — Demand Estimates for Bricks (In Million Units)

Years	Bricks
1962	213
1963	230
1967	298

PRODUCTION TARGETS

Existing establishments will be able to meet domestic demand. As indicated above, all that is needed is to raise the quality of the chamotte and silica bricks produced by the Filyos Factory to the level of the corresponding import products.

The plants under construction will be able to meet total requirements in magnesite and chrome magnesite bricks at the beginning of 1964.

INVESTMENTS

TABLE 176 — Investments in Firebricks (Thousand TL.)

	1963-64	1965	1966	1967
In Domectic Currency	16 400	700	900	900
In Foreign Currency	10 600	300	500	500
TOTAL	**27 000**	**1 000**	**1 400**	**1 400**

Table 176 shows the investments to be made for firebrick and chrome-magnesite brick production. The expansion of the Filyos Factory is not included in these investments.

Table 177 shows private investment in the brick industry according to the figures given in the projects of this sector.

TABLE 177 — Private Investments in Brick and Tile Industry (Thousand TL.)

	1963	1964	1965	1966	1967
In Domectic Currency	4 100	—	—	—	—
In Foreign Currency	750	—	—	—	—
TOTAL	**4 850**	—	—	—	—

VALUE ADDED

(Million TL.)

	1962	1963	1967
Ordinary Brick - Tile	19.8	20.7	29.0
Refractory	7.3	7.6	13.3
TOTAL	27.1	28.3	42.3

PROBLEMS

The main problem in this industry is that of quality. The raw materials used should be chosen more carefully and the official research institutes should investigate the matter of higher quality raw materials. Production must be submitted to a strict quality control.

A research institute on construction, which will have the task of studying local construction materials, means of improving them, and building techniques, should be set up under the control of the Ministry of Reconstruction and Settlement and work in liasion with the relevant departments of Technical Universities.

GLASS AND GLASS - WARE INDUSTRY

BASIC PRINCIPLES AND METHODS

Three separate groups of products can be distinguished in this industry: (1) bottles, (2) glass-ware and (3) window glass. Demand estimates for bottles and glass-ware were based on the income elasticity of demand, and for window glass, on the estimated requirements of the construction sector.

PRESENT SITUATION

Bottles and glass-ware are manufactured in the Paşabahçe Glass Factory and about 30 small enterprises in İstanbul, in two establishments in İzmir, and one in Adapazarı.

The bottle and glass-ware capacity of the Paşabahçe Factory is 40 thousand tons. The combined capacity of the other establishments roughly equals that of Paşabahçe. Total capacity is thus about 70 - 80 thousand tons.

Production and import figures for recent years are given in Table 178.

TABLE 178 — Production and Imports of Bottles and Glass-Ware (Thousand Tons)

	Production		Imports		Total	
Years	Bottles	Glass-ware	Bottles	Glass-ware	Bottles	Glass-ware
1959	31.6	9.6	0.2	0.2	31.8	9.8
1960	11.1	10.0	0.07	0.4	11.17	10.4
1961	18.4	9.0	0.1	0.1	18.5	9.2

The only plant that produces window glass is the Çayırova Factory. It started production in July, 1961, and has a capacity of 37,500 tons, or 7,500,000 m² of window glass.

TABLE 179 — Imports and Production of Window Glass (Thousand Tons)

Years	Imports	Production	Total
1959	20.7	—	20.7
1960	19.5	—	19.5
1961	—	12.0	12.0

DEMAND ESTIMATES AND PRODUCTION TARGETS

Bottle production has been assumed to increase in line with national income.

Demand for glass-ware was estimated on the basis of income elasticity. Demand estimates for these two articles are given in Table 180.

Demand estimates for window glass, based on demand estimates in the construction sector, are shown in Table 181.

TABLE 180 — Demand Estimates for Bottles and Glass ware (Thousand Tons)

Years	Bottle	Glass-ware
1963	27.0	13.0
1964	28.8	14.5
1965	30.8	16.4
1966	32.9	18.2
1967	35.3	20.3

TABLE 181 — Demand Estimates for Window Glass

Years	(Thousand m^2)	(Thousand Tons)
1963	3 550.0	28.2
1964	3 766.0	30.3
1965	4 041.0	32.4
1966	4 666.0	35.0
1967	5 000.0	37.5

INVESTMENTS

There is no need for new investments since present capacity will be able to meet demand until 1968.

IMPORT-EXPORT

Bottle and glass-ware imports have so far been very small in relation to domestic production. Only crystal-ware, which is not produced in Turkey, is imported.

There is an export potential. If domestic producers are given information about demand on foreign markets, exports prospects may increase.

VALUE ADDED

Value added in the glass industry is shown in Table 182.

TABLE 182 — Value Added in Glass Industry (Million TL.)

	1962	1963	1967
Bottle	25.1	27.0	35.3
Glass-were	11.4	13.0	20.3
Window glass	11.7	12.4	17.5
TOTAL	**48.2**	**52.4**	**73.1**

PROBLEMS AND MEASURES

The most important problem in the glass industry is utilization of idle capacity. Glass and glass-ware producers should form an association and work in common to promote exports.

POTTERY, TILE AND PORCELAIN INDUSTRY

BASIC PRINCIPLES AND METHODS

This branch of industry was considered under three gruops : (1) china table-ware, (2) sanitary ware and (3) square tiles.

Demand estimates for china table-ware were based on income elasticity. Demand for sanitary ware and square tiles was estimated on the basis of past consumption trends.

PRESENT SITUATION

Until recently, table chine requirements were met wholly by imports; now only part of requirements are met in this way. Domestic production started with the establishment of a factory in 1958. This factory tends at present to specialize in sanitary ware. Its production of porcelain table-ware and ornamental articles takes second place in importance.

A porcelain factory with a capacity of 3,200 tons a year was opened in İstanbul in August 1962. With the 3,000 tons capacity of the plant which the Sümerbank is establishing in İstanbul, total capacity by the end of 1964 will amount to 6,200 tons.

Sanitary ware requirements are met partly by imports. A factory was set up in 1959 to produce these articles. The capacity of this factory, if worked to produce sanitary ware only, is of 2,400 tons. With the Sümerbank plant which will be completed in 1964, total capacity will go up to 6,400 tons.

Square tile requirements were met until lately by imports. A factory set up in 1958 is now producing tiles but its output is relatively small. Another plant with a capacity of 4,500 tons started production at the end of 1960 and its output was able to meet part of requirements in 1961.

DEMAND ESTIMATES AND PRODUCTION TARGETS

Demand estimates for china table-ware (Table 183) were based on the income elasticity of demand.

TABLE 183 — Demand Estimates for China Table-Ware (Thousand Tons)

	1963	1964	1965	1966	1967
Demand	2.4	2.6	2.9	3.1	3.4

Since capacity will be 3 200 tons in 1963 and 6 200 tons in 1965, it may be possible to export available surpluses.

Table 184 gives demand estimates for sanitary ware and the production targets of existing factories and those under construction.

TABLE 184 — Demand Estimates and Production Targets for Sanitary Ware
(Thousand Tons)

Years	1963	1964	1965	1966	1967
Demand Estimates	3.4	3.9	4.4	5.0	5.5
Production Targets	2.0	3.3	5.5	5.5	5.5
Difference	— 1.4	— 0.6	+ 1.1	+ 0.5	0

Table 185 gives demand estimates for square tiles and the production targets of existing tile factories and those under construction.

TABLE 185 — Demand Estimates and Production Targets for Square Tiles
(Thousand Tons)

Years	1963	1964	1965	1966	1967
Demand Estimates	6.4	6.7	7.1	7.3	7.7
Production Targets	4.5	5.5	10.5	10.5	10.5
Difference	— 1.9	— 1.2	+ 3.4	+ 3.2	+ 2.8

INVESTMENTS

No other investments besides the two Sümerbank factories under construction will be needed. Total investment in this sector in 1963 and the following years is shown in Table 186.

TABLE 186 — Investments **(Million TL.)**

Years	1963	1964	1965	1966	1967
In Domestic Currency	24.4	24.4	1	1	1
In Foreign Currency	20.1	20.2	1	1	1
TOTAL	**44.5**	**44.6**	**2**	**2**	**2**

IMPORT AND EXPORTS

Imports of sanitary ware and square tiles should just cover the deficits in internal production appearing in Tables 184 and 185.

Table china capacity exceeds requirements. Exports may take place after the Sümerbank factory starts production in 1964.

VALUE ADDED

Total value added in the ceramic industry is shown in Table 187.

TABLE 187 — Value Added in Ceramic Industry **(Million TL.)**

Years	1962	1963	1967
Value Added	33.5	44.4	82.2

CEMENT INDUSTRY

BASIC PRINCIPLES, OBJECTIVES AND METHODS

The main objectives in the cement industry are : to determine the sales area of each factory on the basis of minimum transport costs; to ensure that each factory meets the needs of its own sales area; to export production surpluses; to eliminate export subsidies by initiating cost-reducing measures; to follow a program for the expansion of plant capacity; and to change over from the wet to the dry system.

Cement requirements for construction, as implied by the 1963-67 investments proposed in the macro-model, were estimated on the basis of the relationship between annual cement consumption and annual investments (excluding machinery and equipment) in construction during the period 1950-60. The elasticity of cement consumption to construction activity was computed as 1.35. Moreover, it is estimated that with the development of the technology used in private investment, the cement component of investment per construction unit will increase. However, this increasing utilization continues only up to a certain level of investment and remains constant after this level is reached. The cement consumption that corresponds to this level of investment is estimates as 2,400,000 tons. After this point the elasticity of cement consumption to investment becomes unity.

PRESENT SITUATION

In general, cement mills are capable of producing up to 20 per cent in excess of the capacity specified at the time of installation. Capacity as specified at installation will henceforth be termed "Guaranteed Capacity" and production which can be realized by the cement mills will be termed "Potential Capacity."

Present cement consumption is 1,950,000 tons. Total guaranteed capacity is 1,860,000 tons; however, the cement mills are capable of producing up to 20 per cent in excess of this capacity.

TABLE 188 — Guaranteed Capacities of Existing Cement Mills

The İstanbul Group Mills	760 000	tons/year	
İzmir Mill	150 000	" "	
Ankara Mill	120 000	" "	
Eskişehir Mill	150 000	" "	
Adana Mill	150 000	" "	
Afyon Mill	85 000	" "	
Çorum Mill	85 000	" "	
Pınarhisar Mill	85 000	" "	
Balıkesir Mill	85 000	" "	
Elâzığ Mill	85 000	" "	
Gaziantep Mill	85 000	" "	
Sivas Mill	200 000	" "	
	2 040 000	" "	
Tarsus Mill (White Cement)	3 000	" "	(*)

With the unfinished mills (Konya 150 000 tons: Söke 85 000 tons; Niğde 85 000 tons; Bartın 500 000 tons "**") the guaranteed capacity will rise to 2 583 000 tons. Since an excess production of around 20 per cent is possible, the above mills can assure a production of 3 100 000 tons in 1963.

Cement consumption in Turkey was 71 kgs per capita in 1960.

The annual increase in cement consumption is estimated to be 10 per cent. The sales price of cement is determined by the Ministry of Industry under Decree No. 1164. At present, the ex-factory price of one ton of cement is 140 TL.

DEMAND PROJECTIONS

Table 189 shows cement requirements for 1963-67 estimated on the basis of the cement component of the construction investment necessary for the realization of the investment total.

TABLE 189 — Estimates of Cement Requirements (Million TL.)

Years	Construction Investment	Cement Requirements arising from Construction Investments (Mil. T.)
1962	5.403	3.2
1963	6.063	2.4
1967	8.983	3.6
1967 Index (1962=100)	166	163

(*) Capacity of the Tarsus Mill is 7 500 tons. However, because of technical reasons, this mill cannot reach the said capacity.

(**) The guaranteed capacity of the Bartın plant is 500 000 tons when the slag content is 70 per cent; initial capacity is 220 000 tons with a 30 per cent slag content.

PRODUCTION TARGETS

Production targets can be determined by taking present capacity and demand projections into consideration. With each mill producing at 20 per cent above its guaranteed capacity together with the output of the new plants at Konya, Söke, Niğde and Bartın, cement requirements up to 1966 can be met. If it is supposed that each mill has a specified sales area in which the overall cost of delivered cement is to be minimized, it becomes apparent that some mills have capacity in excess of their sales areas whereas others have deficient capacity. Accordingly, each mill will be brought to the capacity necessary to meet the requirements of its own area and the yearly surplus production will be exported. In order to achieve this objective, those mills which are of too low a capacity to meet current requirements will be converted from the wet to the dry process and will be expanded according to a program.

Under this expansion program, the following production targets will be assured:

Years	Production in Thousand Tons
1963	2 649
1964	2 879
1965	3 100
1966	3 447
1967	3 737

INVESTMENTS

It is estimated that the conversion from the "wet" to the "dry" process will necessitate a foreign exchange investment of 6 million TL. ($ 700 000) and a domestic investment of 8 million TL. per mill. However, if the Turkish Machinery and Chemical Industry (MKEK) produces the machinery and equipment requiring foreign exchange, the investment can be effected almost entirely in domestic currency.

The necessary machinery and equipment for the mill to be erected in Eastern Anatolia have already been imported. In addition to the 15 million TL. spent on this machinery and equipment, another 15 million TL. must be spent to cover domestic costs. Necessary additions must be made to the Bartın mill in order to raise the percentage of slag used to 70 per cent.

TABLE 190 — Investment Program for the Cement Industry **(Million TL.)**

1963		1964		1965	
Foreign Exchange	Total	Foreign Exchange	Total	Foreign Exchange	Total
26.0	60.0	6.0	14.0	18.0	42.0

A new cement mill will have to be erected in 1967 to meet 1968 requirements. Investments in this industry will total 130 million TL. in five years.

EXPORTS

Comparison of annual production to be realized as a result of the expansion program with the yearly demand brings out the production surpluses shown in Table 191.

TABLE 191 — Estimated Cement Surplus for Export **(Thousand Tons)**

Years	Production	Demand	Surplus
1963	3 737	3 595	142
1964	2 649	2 425	224
1965	2 879	2 775	104
1966	3 100	3 065	35
1967	3 447	3 325	122

With the implementation of the expansion program,the above exports may be realized, especially in view of the needs of Near Eastern and North African countries.

VALUE ADDED

The value added per ton of cement produced is 75 TL. Accordingly value added will be as follows :

Years	Value Added	Index
1962	161 Million TL.	100
1963	183 " "	
1967	270 " "	167

PROBLEMS AND MEASURES

a. From the point of view of the distance between them and of their capacities, cement mills have not been established in an economical manner. No new mills should be erected until the capacities of each of the previously constructed ones are stepped-up in the amounts indicated below :

For Western Anatolian Cement Mills	215 000 tons/year
For Central Anatolian Cement Mills	160 000 " "
For Eastern Anatolian Cement Mills	120 000 " "

Because of the choice of small units, the cost of present mills is 25 per cent above what it should be.

b. Power expenditures in the State cement mills are 20 per cent and labor costs 40 per cent too high. Measures will be taken to reduce these to a minimum.

c. A research laboratory to study and apply developments in cement technology and economics will promptly be established. The first objectives of this laboratory will be to investigate the possibilities of producing "pouzzola-trass" and "blast-furnace-slag" cements.

CEMENT PRODUCTS INDUSTRY

BASIC PRINCIPLES AND METHODS

It will be advantageous to establish a cement products industry. It is more economical (in view of the fact that these products help to shorten construction periods, reduce costs and may be substituted for other building materials) to use cement which has been manufactured into construction materials, than to use cement directly. In addition to this, cement consumption fluctuates according to seasons, whereas cement production is on a steady basis. This discrepancy between production and consumption entails large stocks. Since stocks cannot be preserved so easily, the cement industry is forced to step-down production. With the establishment of a cement products industry, these difficulties may be overcome.

PRESENT SITUATION AND DEMAND

At present, the private sector produces 6,500 tons per year of asbetos cement pipes, while pipe requirements are around 100,000 tons. The balance of requirements is met by locally manufactured (35,000 tons per annum) and imported (an average of 30,000 tons per annum or 20 million TL. worth of foreign exchange) cast iron pipes. As asbestos cement pipes are two and a half to three times lighter than cast iron pipes and cheaper by one-third, there is advantage in establishing this industry. Since the present capacity for manufacturing cast iron pipes is around 35,000 tons, production of 65,000 tons of asbestos cement pipes will meet requirements.

A small amount of reinforced concrete poles is manufactured in the private sector. At present, yearly requirements in poles stand at 115,00 units, of which approximately 40,000 are supplied by forestry products and the remainder by iron and reinforced concrete poles. Concrete poles are more expensive than timber ones, but last longer and are easier and cheaper to maintain.

Eternit (corrugated sheets) is beginning to be used instead of tiles for roofing. Eternit is manufactured internally on a small scale. But this product is not of common use or in much demand in Turkey. In cases where there is no drawback to using eternit from an architectural standpoint, it will be advisable to include it in building specifications so that its use may be encouraged.

PRODUCTION TARGETS AND INVESTMENTS

It will be profitable to establish a manufacturing capacity of 65,000 tons in asbestos cement pipes. Around 35,000 tons of requirements will be met by a State plant to be erected in Ankara. The remaining 30,000 tons will be covered by the increase of production in the private sector.

The establishment of a plant with a capacity for manufacturing 10,000 concrete poles per year will cost 12 million TL. of which 6.5 million TL. will be in foreign currency. Value added has been estimated on the basis of an initial capacity of 10,000 poles.

The cost of erecting an eternit factory, with a capacity of 500,000 sq. meters of corrugated sheets per year, is estimated to amount to 5 million TL., of which 2.9 million TL. will be in foreign exchange. Since eternit will be a substitute for the tiles presently used in roofing, requirements cannot be said to exist and an initial capacity of 500,000 sq. meters was considered to be sufficient.

Investments will be as follows :

Years	**Investment (in milion TL.)**
1964	23.7
1965	23.7

VALUE ADDED

The value added by this industry is shown below :

Years	**Valude Added (in million TL.)**
1966	18.4
1967	22.4

IRON, STEEL AND METALLURGICAL INDUSTRY

BASIC PRINCIPLES, METHODS AND TARGETS

Production facilities in this branch of industry can meet the greater part of demand. There is even idle capacity in many sub-sectors, which if utilized could lead to exportable surpluses. Idle capacity in the branches where there are no export prospects (for reasons of quality and cost) will remain a problem for many years. Extreme care should therefore be taken in investing in this sector.

Per capita consumption in 1960 was 19.1 kg. Production targets are to meet per capita consumption figures of 20.8 kg. in 1963 and 28.1 kg. in 1967.

TABLE 192 — Situation in 1960 (Million TL.)

Main groups	Production	Imports	Exports	Consumption (Prod.+Imp.-Exp.±Stocks.)
Iron and steel	671.6	504.0	20.1	1 045.7
Copper and copper alloys ...	305.8	—	135.3	175.5
Other metals	23.0	1.2	12.0	12.2
TOTAL	**1 000.4**	**505.2**	**167.4**	**1 228.4**

Table 192 gives the aggregate values for the main groups. In the following tables, quantities and values will be given separately for the different products.

The following assumptions were used in making estimates for 1962 and the years to follow :

a. Production, import and other values were calculated on the basis of the 1961 unit prices of the products.

b. For products with no stock records, stocks were assumed to be transferred in total to the subsequent year.

All the semi-finished products included in Table 193 are utilized by units producing finished products. These figures are given in order that they may be compared with corresponding figures in foreign countries and to serve as a basis for Table 194.

TABLE 193 — Semi-finished Iron and Steel Products, 1960.

Semi-finished Products	Unit Price TL./Ton	Production		Imports		Exports		Consumption (Prod. + Imp.-Exp. ± Stocks)	
		Quantity ('000 Tons	Value (Million TL.)	Quantity ('000 Tons)	Value (Million TL.)	Quantity ('000 Tons)	Value (Million TL.)	Quantity ('000 Tons)	Value (Million TL.)
Pig iron	900	246.7	222.0	4.6	4.2	9.9	8.6	252.8	227.5
Ingots	1 000	281.8	281.8	—	—	—	—	281.8	279.4
Billets	1 150	154.5	177.7	24.3	27.9	10.0	11.5	158.9	182.8
Sheet bars	1 300	36.8	47.9	0.4	0.5	—	—	28.7	37.3
Wire rods	1 600	—	—	12.4	19.8	—	—	12.4	19.8
Strips	1 540	—	—	28.8	44.4	—	—	28.8	44.4
Coke		549.0	128.4	—	—	—	—	290.0	87.0
TOTAL				70.5	96.8	19.9	20.1		

TABLE 194 — Iron and Steel Products Used in Other Sectors, 1960.

Products	Unit Price TL./Ton	Production		Imports		Exports		Consumption (Prod. + Imp.-Exp. ± Stocks)	
		Quantity ('000/Tons)	Value (Million TL.)	Quantity ('000 Tons)	Value (Million TL.)	Quantity ('000 Tons)	Value (Million TL.)	Quantity ('000 Tons)	Value (Million TL.)
Rods	1 500	116.8	175.2	44.5	66.7	—	—	153.6	230.3
Beams	1 500	67.8	101.7	13.3	20.0	—	—	73.7	110.6
Railroad material	2 000	7.8	15.6	42.9	85.8	—	—	49.7	99.3
Plates	1 700	7.5	12.8	0.2	0.4	—	—	3.6	6.1
Sheets	2 200	22.4	49.3	27.4	60.2	—	—	51.1	112.4
Tinplate	2 850	—	—	30.9	88.0	—	—	30.9	88.0
Strips	2 200	—	—	5.9	13.0	—	—	5.9	13.0
Steel and tool steel	2 500	8.6	21.5	4.3	10.6	—	—	12.9	32.2
Wires	1 920	32.4	62.2	4.1	7.8	—	—	36.5	70.0
Steel pipes	2 450	24.4	59.9	13.3	32.7	—	—	37.8	92.5
Pig iron pipes ...	2 500	15.1	37.6	6.5	16.3	—	—	19.9	49.7
Pig iron casting	2 500	54.3	135.8	—	—	—	—	54.3	135.8
Others	5 000	—	—	1.1	5.7	—	—	1.1	5.7
TOTAL	—	357.1	671.6	194.4	407.2	—	—	531.0	1 045.6

On the same bases as above, Tables 195 and 196 were prepared for copper and copper alloys.

TABLE 195 — Copper and Copper Alloy Semi-Manufactures, 1960
(Thousand Tons — Million TL.)

Semi-manufactures	Unit Price	Production		Exports		Consumption (Prod.-Exp.±Stocks)	
	TL./Ton	Quantity	Value	Quantity	Value	Quantity	Value
Blister copper	7 800	26.9	210.1	17.3	135.3	9.6	74.9
Refined copper	8 320	2.9	24.0	—	—	2.9	24.0
Electrolytic copper	9 630	0.9	8.4	—	—	0.9	8.4
Copper, Brass and Bronze-wedge	7 800	18.2	142.3	—	—	18.2	142.3
Bars, pipes	8 290	10.1(*)	83.5	—	—	7.9	65.4
TOTAL	—	—	—	**17.3**	**135.3**	—	—

TABLE 196 — Copper and Copper Alloy Products used in other Sectors, 1960
(Thousand Tons — Million TL.)

Products	Unit Price	Production		Exports		Consumption (Prod.-Exp.±Stocks)	
	TL./Ton	Quantity	Value	Quantity	Value	Quantity	Value
Bars, pipes	8 290	2.2	18.1	—	—	2.2	18.1
Wires	14 000	2.0	27.7	—	—	2.0	27.7
Plates and strips	9 500	13.1(**)	124.7	—	—	13.1	124.7
TOTAL	—	**17.3**	**170.5**	—	—	**17.3**	**170.5**

Figures for other metals are not given as their share within the total is insignificant.

DEMAND ESTIMATES

Demand estimates were based on (1) consumption trends in the past ten years, (2) total consumption in relation to GNP and expected developments in related sectors, and (3) per capita consumption.

Table 197 shows the demand for various iron and steel products in 1962 and later years.

(*) 2,200 tons of this are used in other sectors.

(**) Actual production 14 200 tons; 1,100 tons of this is used as raw material in wire extruding plants.

TABLE 197 — Demand for Iron and Steel Products
(Thousand Tons — Million TL.)

Products	1962		1963		1967		1977	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Rods	168.0	252.0	200.0	300.0	310.0	465.0	540.0	810.0
Beams	79.0	118.5	95.0	142.5	145.0	217.5	253.8	380.7
Railroad materials	42.0	84.0	45.0	90.0	66.4	132.8	135.0	270.0
Plates	10.6	18.0	11.4	19.4	16.8	28.6	34.2	58.1
Sheets	45.4	99.9	48.6	106.9	71.7	157.7	145.8	320.8
Tin sheets	29.7	84.6	31.8	90.6	46.9	133.7	95.4	271.9
Strips	3.4	7.7	3.6	7.9	5.3	11.7	10.8	23.8
Steel and tool steel	11.2	28.0	12.0	30.0	17.7	44.3	36.0	90.0
Wires	30.8	59.1	33.0	63.4	48.7	93.5	99.0	190.1
Steel pipes	33.6	82.3	36.0	88.2	53.1	130.1	108.0	264.6
Pig iron	35.8	89.5	38.4	96.0	56.6	141.5	115.2	288.0
Pig iron castings	69.4	173.5	74.0	185.0	100.0	275.0	223.2	558.0
Others	1.1	5.5	1.2	6.0	1.8	9.0	3.6	18.0
Total Demand	**560.0**	**1 102.6**	**630.0**	**1 225.9**	**950.0**	**1 840.4**	**1 800.0**	**3 544.0**
INDEX	**100.0**		**112.5**		**169.6**			

The demand for various copper and alloy products is shown in Table 198.

TABLE 198 — Demand for Copper and Copper Alloy Products
(Thousand Tons — Million TL.)

Products	1962		1963		1967		1977	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
20 % of bars, pipes	2.2	18.5	2.3	18.7	5.4	44.4	12.5	103.6
Wires	2.0	28.0	2.1	30.0	3.9	54.0	14.0	196.0
Plates and strips	13.1	124.7	13.1	124.7	14.5	38.0	17.6	167.2
TOTAL	**17.3**	**171.2**	**17.5**	**173.4**	**23.8**	**236.4**	**44.1**	**466.8**
INDEX	**100.0**		**101.2**		**137.6**			

Lead, gold, silver, ferro chromium and carbite constitute the other metals group. In respect of these, only global figures will be given. Total demand for the products of the sector is shown in Table 199.

TABLE 199 — Total Demand for Iron, Steel and Metallurgical Products
(Thousand Tons — Million TL.)

Products	1962		1963		1967		1977	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Iron and steel products	560.0	1 102.6	630.4	1 226.9	949.7	1 839.7	1 800.0	3 544.0
Copper and copper alloy products	17.3	171.2	17.5	173.4	23.8	236.4	44.1	466.8
Other metals	—	15.0	—	19.1	—	37.6	—	60.2
TOTAL		**1 288.8**		**1 419.4**		**2 113.7**		**4 071.0**
INDEX	**100.0**		**110.1**		**164.0**			

PRODUCTION TARGETS

Production facilities in this sector can already meet a substantial part of demand. After the continuous rolling mill for casting bars and strips of the Karabük Iron and Steel Works starts production in 1964, and the Ereğli Iron and Steel Mills start production in 1965, only limited quantities of products of special quality and size will be imported. In order to utilize fully the facilities of the sector, export possibilities must be sought. The situation can be seen clearly in the following tables. Separate tables have been prepared for iron and steel, copper and copper alloys and other metals.

a. Iron and Steel

TABLE 200 — Production of Iron and Steel Finished Products
(Thousand Tons — Million TL.)

	1962		1963		1967	
Products	**Quantity**	**Value**	**Quantity**	**Value**	**Quantity**	**Value**
Rods	168.0	252.0	200.0	300.0	310.0	464.1
Beams	79.0	118.5	95.0	142.5	145.0	218.4
Railroad material ...	42.0	84.0	45.0	90.0	66.4	132.8
Plates	—	—	—	—	16.8	28.6
Sheets	30.5	67.3	30.6	67.3	71.7	157.7
Tinplates	—	—	—	—	46.9	133.7
Strips	—	—	—	—	5.3	11.7
Steel and tool steel ...	8.2	20.5	9.0	22.5	17.7	44.3
Wires	29.8	57.2	32.0	61.4	48.7	93.5
Steel pipes	33.6	82.3	36.0	88.2	53.1	130.1
Pig-iron pipes	25.0	62.5	25.0	62.5	40.0	100.0
Pig-iron castings	69.4	173.5	74.0	185.0	110.0	275.0
TOTAL	**485.6**	**917.8**	**546.6**	**1 019.4**	**931.6**	**1 789.9**
INDEX	**100**		**112.6**		**191.8**	

The production quantities and values given above were revised in the light of domestic demand. Demand for the semi-manufactures (including spare parts etc.) which cannot be met internally, is shown in Table 201.

TABLE 201 — Import Requirements in Iron-Steel
(Thousand Tons — Million TL.)

	1962		1963		1967	
Products	**Quantity**	**Value**	**Quantity**	**Value**	**Quantity**	**Value**
Steel strips	37.0	57.0	40.0	61.6	—	—
Plates	10.6	18.0	11.4	19.4	—	—
Sheets	14.8	32.6	18.0	39.6	—	—
Tinplates	29.7	84.6	31.8	90.6	—	—
Strips	3.4	7.7	3.6	7.9	—	—
Steel and tool steel ...	3.0	7.5	3.0	7.5	—	—
Wires	1.0	1.9	1.0	1.9	—	—
Pig-iron pipes	10.8	27.0	13.4	33.5	16.6	41.6
Others	1.0	5.0	1.2	6.0	1.8	8.9
Spare parts, etc.		120.3		127.8		231.5
TOTAL		**361.6**		**395.8**		**282.0**

There will be no need to import any more steel products after the Ereğli Iron and Steel Mills have begun to operate in 1965.

Export prospects in the iron-steel group are shown in Table 202.

TABLE 202 — Export Possibilities in Iron Steel
(Thousand Tons — Million TL.)

Products	1962		1963		1967	
	Quantity	Value	Quantity	Value	Quantity	Value
Billet	—	—	55.0	63.3	—	—
Pig - iron	—	—	—	—	105.0	94.5
TOTAL	—	—	**55.0**	**63.3**	**105.0**	**94.5**

b. Copper and Copper Alloys

TABLE 203 — Production of Copper Alloy Products
(Thousand Tons — Million TL.)

Products	1962		1963		1967	
	Quantity	Value	Quantity	Value	Quantity	Value
Bars, pipes (*)	2.2	18.1	2.2	18.1	5.4	44.4
Wires	2.0	27.1	2.0	27.1	9.6	134.0
Plates and strips	13.1	124.7	13.1	124.7	18.7	178.0
TOTAL	**17.3**	**170.5**	**17.3**	**170.5**	**33.7**	**356.4**
INDEX	**100.0**		**100.0**		**194.8**	

Import requirements in the copper and copper alloys group, which consist only of raw materials and spare parts, are shown in Table 204.

TABLE 204 — Import Requirements in the Copper and Copper Alloys Group
(Million TL.)

Products	1962	1963	1967
Raw materials and spare parts	30.0	34.8	60.0

Export possibilities in the copper and copper alloys group are shown in Table 205.

(*) About 80 per cent of the copper and copper alloy products of pressing plants are used as raw materials in rolling mills. For this reason only approximately 20 per cent of actual production is shown here.

TABLE 205 — Export Prospects in the Copper and Copper Alloys Group (Thousand Tons — Million TL.)

Products	1962 Quantity	1962 Value	1963 Quantity	1963 Value	1967 Quantity	1967 Value
Plister copper	16.7	130.0	16.0	125.0	8.3	65.0
Bars and pipes	—	—	—	—	1.6	13.0
Wires	—	—	—	—	5.7	80.0
Plates and strips	—	—	—	—	4.0	38.0
Electrolytic copper	—	—	1.7	16.0	—	—
TOTAL	**16.7**	**130.0**	**17.7**	**141.0**	**19.6**	**196.0**

c. The value of production, potential exports and import requirements in other metals are given in Table 206.

TABLE 206 — Value of Production, Exports and Imports in Other Metals (Million TL.)

	1962	1963	1967
Production	40.0	46.6	83.6
Exports	25.0	27.5	46.0
Imports	2.0	3.1	5.2
Production Index	100	116.5	209.0

The total value of production, exports and imports in the sector as a whole is given in Table 207.

TABLE 207 — Value of Total Production, Exports and Imports in the Sector (Million TL.)

	1962	1963	1967
Production	1 128.3	1 236.5	2 229.9
Exports	155.0	231.8	336.5
Imports	393.6	433.7	347.2
Production Index	100	109.6	197.6

The value of import substitution in the sector as a whole is given in Table 208.

TABLE 208 — Import Substitution (Million TL.)

	1963	1964	1965	1966	1967
Import Substitution	—	94.7	364.1	512.4	595.6

VALUE ADDED

The value added in each group (iron-steel, copper and copper alloys and other metals) was calculated for 1960 and the share of each group in total production (including that of semi-manufactures) was found. It was assumed that these shares would remain unchanged in the plan period. The value added by each branch as per cent of the total value of production is as follows :

	Value Added
Iron and Steel	17.5 %
Copper and Copper alloys	27.0 %
Other metals	28.0 %

The value added in the sector, calculated according to the above percentages, is given in Table 209.

TABLE 209 — Value Added in the Sector (Million TL.)

Main Groups	1962	1963	1967
Iron and steel	421.2	452.7	827.2
Copper and copper alloys	185.3	187.7	323.7
Other metals	10.2	13.0	23.4
TOTAL	**616.7**	**653.4**	**1 174.3**
INDEX	**100**	**106.0**	**190.4**

INVESTMENTS

The most important continuing investment in this sector is in the Ereğli Iron and Steel Mills. These plants were started in 1961 and are expected to be completed by the end of 1964.

Total investments in the sector in the plan period will amount to 2,132.8 million TL., of which 1,513 million TL. will be in foreign exchange.

Public and private investments in the five-year period are shown separately in the following tables. Investment in the Ereğli Iron and Steel Corporation, which is a mixed enterprise, is shown against the private sector.

TABLE 210 — Investments in Iron and Steel

(Million TL.)

	1963		1964		19 65		1966		1967		TOTAL	
	Foreign Exchange	Total	Foreign Exchange	Total	Foreign Exchange	Total	Foreing Exchange	Total	Foreign Exchange	Total	Foreign Exchange	Total
State	49.6	147.9	20.2	67.0	12.3	26.5	3.0	14.0	—	—	85.1	255.5
Private	810.5	961.9	324.5	408.0	107.5	215.0	7.5	15.0	7.5	15.0	1 257.5	1 614.9
TOTAL	**860.1**	**1 109.8**	**344.7**	**475.0**	**119.8**	**241.5**	**10.5**	**29.0**	**7.5**	**15.0**	**1 342.6**	**1 870.3**

TABLE 211 — Investments in Copper and Copper Alloys

(Million TL.)

	1963		1964		1965		1966		1967		TOTAL	
	Foreign Exchange	Total	Foreign Exchange	Total	Foreign Exchange	Total	Foreing Exchange	Total	Foreign Exchange	Total	Foreign Exchange	Total
State	36.0	47.0	29.0	47.0	—	—	—	—	—	—	65.0	94.0
Private	0.2	0.3	—	—	—	—	—	—	—	—	0.2	0.3
TOTAL	**36.2**	**47.3**	**29.0**	**47.0**	—	—	—	—	—	—	**65.2**	**94.3**

TABLE 212 — Investments in Other Metals

(Million TL.)

	1963		1964		1965		1966		1967		TOTAL	
	Foreign Exchange	Total	Foreign Exchange	Total	Foreign Exchange	Total	Foreign Exchange	Total	Foreign Exchange	Total	Foreign Exchange	Total
State	—	—	40.0	40.0	39.2	58.2	26.0	70.0	—	—	105.2	168.2
Private	—	—	—	—	—	—	—	—	—	—	—	—
T O T A L	—	—	**40.0**	**40.0**	**39.2**	**58.2**	**26.0**	**70.0**	—	—	**105.2**	**168.2**

TABLE 213 — Investments in the Iron - Steel and Metallurgical Sector

(Million TL.)

	1963		1964		1965		1966		1967		TOTAL	
	Foreign Exchange	Total	Foreign Exchange	Total	Foreign Exchange	Total	Foreing Exchange	Total	Foreign Exchange	Total	Foreign Exchange	Total
State	85.6	194.9	89.2	154.0	51.5	84.7	29.0	84.0	—	—	255.1	517.6
Private	810.7	962.2	324.5	408.0	107.5	215.0	7.5	15.0	7.5	15.0	1 257.7	1 615.2
T O T A L	**896.3**	**1 157.1**	**413.7**	**562.0**	**159.0**	**299.7**	**36.5**	**99.0**	**7.5**	**15.0**	**1 513.0**	**2 132.8**

MEASURES

a. The ash content and humidity degree of 0 - 10 grade coals will be adjusted to conform to world standards.

b. Efforts will be made to produce metallurgical coke of a quality conform to world standards and to prevent its use for non-industrial heating purposes.

c. Means will be sought and measures taken to bring down to international levels the costs of the finished and semi-finished products of the industry.

d. Studies must be initiated to ensure the rapid channelling of scrap to steel mills; if necessary, scrap must be imported.

e. The price of blister copper, which is the raw material for both the copper manufacturing and using industries must be lowered to the level of export prices.

The facilities of the Machinery and Chemical Industries Corporation will be enlarged, if necessary, to make it possible to recuperate dross from the gold and silver which plants producing electrolytic copper are not able to recover in the course of electrolysis. Measures will be taken to prevent the copper, gold and silver contained in the slag which is purchased from firms processing blister copper in order to be exported from leaving the country.

f. Care will be taken to maintain at reasonable levels the costs of the products to be manufactured by plants under construction or to be established later.

g. Plants producing lead from scrap will be subject to expenditure tax in the same way as plants producing lead from lead ores.

h. Import requirements in iron and steel have been stated in Table 201. In copper and copper alloys, and other metals, import requirements consist only of certain raw materials and spare parts. With these exceptions, no other imports will take place.

METAL PRODUCTS AND STRUCTURAL STEEL INDUSTRY

BASIC PRINCIPLES AND METHODS

a. Turkey's metal products industry is well developed. Even so, such metal and structural capital goods as steel bridges, roofs, silos, poles and crane bodies continue to be imported. The reason for this is the system of contract award which is in current use. More effective measures will be taken to prevent the importation of home-produced manufactures.

b. Demand for steel structures has been fairly stationary in the past, but is expected to rise with the increase in investments and exports. Demand for metal products is expected to continue to rise with national income.

PRESENT SITUATION

Metal products and steel structures are the most developed branch of Turkey's machinery industry. Many previously imported items are now produced internally. In the last ten years, imports of such items fell by 50 per cent, and in the field of ammunition, exports are on a large scale.

The present capacity of the industry is in excess of demand. According to the statistics of the Ministry of Industry, capacity in metal products in terms of value, is estimated at more than 3 billion TL. In steel structures, only 40 per cent of capacity is utilized.

DEMAND PROJECTIONS

Total demand is calculated for internal production plus imports.

TABLE 214 — Demand Estimates (Million TL.)

	1962	1963	1967	1977
Internal production (excluding ammunition)	943.0	1 125.0	1 374.0	2 620.0
Imports	215.0	185.0	90.0	120.0
TOTAL Demand	**1 158.0**	**1 310.0**	**1 464.0**	**2 740.0**

PRODUCTION ESTIMATES

Existing capacity can meet the 1967 demand.

TABLE 215 — Production Estimates (Million TL.)

	1962	1963	1967	1977
Private sector	900	980	1 300	2 500
Public sector	43	45	74	130
T O T A L	943	1 125	1 374	2 630

INVESTMENTS

Investments in this sector will be of two kinds : (1) replacement and maintenance investments designed to modernize and increase the productivity of existing plants; and (2) new investments for the manufacture in these same plants of certain products which are at present imported. In the main, these products are : milk churns and containers; steel strands; wire netting; horseshoe nails and tacks; sewing needles; safety pins; various springs; rakes, hoes and spades for farm use; spanners; hand tools such as scissors, pincers and pliers; screw-cutting machines; thread-cutting machines, cutting blades for drilling lathes, razors and acetylene lamps. Yearly imports of these items averaged some 9.3 million dollars in the last three years.

TABLE 216 — Investments (Million TL.)

	1963	1964	1965	1966	1967	Total
Maintenance and Replacement	20.0	30.0	55.0	65.0	67.5	237.5

These investments are expected to be made by the private sector which predominates in this industry.

FOREIGN TRADE

Some of the basic raw materials used in the manufacture of metal products are still imported but as soon as the new investments in steel production and other industries are completed, there should be no need for these imports.

It is assumed that the metal products which are now imported, will be manufactured partly in the new facilities to be set up, and partly in existing plants.

TABLE 217 — Foreign Trade (Million TL.)

	1963	1964	1965	1966	1967
Imports of investment goods	18.0	19.0	16.0	13.0	14.0
Imports of products which cannot be produced internally	113.0	99.0	81.0	68.0	54.0
Imports of raw materials	101.0	94.0	68.0	31.0	30.0
Total imports	232.0	212.0	165.0	112.0	98.0
Import substitution	—	18.5	42.0	58.0	72.5

VALUE ADDED

Value added is approximately 60 per cent of production value in the public sector and 50 per cent in the private sector.

TABLE 218 — Value Added (Million TL.)

	1962	1963	1967	1977
Private sector	450	490	650	1 250
Public sector	26	27	45	72
TOTAL	**476**	**517**	**695**	**1 322**

MEASURES

a. Except in the field of ammunition and steel structures, this is a branch of industry in which the private sector plays an important part. Private investments should therefore be guided in the direction of import substitution.

To achieve this, the volume of credit extended by the Industrial Development Bank should be increased and the services provided by this Bank with regard to determination of investment fields, research on patents and licences and project preparation should be expanded. Moreover, studies to improve quality, raise productivity and lower production costs should be undertaken in order to help industry in those fields. This would lead to export possibilities. Export prospects should be carefully investigated and the industry encouraged to direct its efforts toward exports by making better use of its present capacity.

b. The Ministry of Industry will investigate the possibility of developing the internal production of certain products which are presently imported.

c. In order to make it possible for Turkish manufacturers to take part in contract awards for the construction of NATO and similar installations, for which imports are duty-free, equivalent exemptions will be applied to the domestic raw materials to be used in these constructions.

d. In order that the steel structures and similar products required for new investments may be produced internally, contracts for these investments should be awarded or a partial basis rather than as a whole, and full use should be made of internal production possibilities. In other words, prior to the allocation of foreign exchange for private public investments, the possibility of manufacturing internally the products to be imported should be investigated. Imports should be authorized only when they are necessary. To utilize to the full the capacity of the industry, a center should be set up which will follow closely the activities and capacities of establishments and will be in a position to know where each part can be manufactured. In order to further domestic production, this center should also undertake studies to determine whether certain parts can be produced domestically in the new plants to be set up, and inform the manufacturers concerned of its findings. This center should be financed by contributions from the industry and should safeguard the interests of all establishments on an equal basis.

e. Means of fully utilizing the potential of the ammunition industry for exports will be sought.

f. Small workshops will be encouraged to merge and to operate on more rational and efficient lines, so that quality can be improved and costs lowered.

MACHINERY INDUSTRY

(Excluding Electrical Machinery)

BASIC PRINCIPLES

Priority has been given, in the fields which will produce an increase of national income, to the investment goods which it is possible to manufacture internally and for which comparative cost calculations gave suitable results. In doing this, the technical level and conditions attained by Turkey on the one hand and the new possibilities provided by licence and patent agreements, on the other hand, were taken into consideration.

In estimating the demand for investment goods, the investment requirements of related sectors were taken into account. In estimating the demand for investment goods which are utilized in more than one sector, comparisons were made with total machinery and equipment investments.

Demand for durable consumer goods was estimated after duly weighing the specific studies of manufacturers, the value of imported and domestically manufactured products and income distribution.

a. Machinery, tools and their accessories are manufactured in two ways :

1. Custom Manufacture

Custom manufacture can be considered as an adequate way of using the present excess capacity. This is further supported by the fact that most machine tools are of standard type. Studies have shown that a considerable part of factories and installations could be manufactured internally. These include in particular steel constructions, cooling towers, warehouses, liquid fuel tanks and certain important parts of the equipment for textile, sugar and cement mills, chemical and gas factories, electric power plants, overground cables and mineral extracting and smelting units. However the use of home produced rather than imported investment goods present certain major difficulties, due to the fact that :

a) Projects are commissioned as a whole.

b) Foreign aid is given for the financing of the project as a whole and the construction of plants is commissioned to foreign firms.

c) Manufacturing firms are unwilling to give security if projects are not commissioned as a whole.

d) The organization responsible for determining which parts of projects are to be produced internally and for planning and controlling production is inadequate.

2. Mass-production

In some cases, the cost prices of some of the mass-produced products of private establishments are on a level with international prices.

In preparing projects for new plants, wages and other cost factors should be taken into account and the facilities which will yield the lowest production costs should be selected.

TABLE 219 — Capital Goods which is possible to manufacture internally in the Plan Period

Items	Customs Tariff No.
High pressure steam boilers	84.01
Internal combustion engines	84.06
Hydraulic turbines	84.07
Pumps	84.10
Fans	84.11.10
Air and other gas compressors	84.11.20
Furnaces and automatic burners	84.13
Industrial furnaces	84.14
Refrigerator parts	84.15.90
Heat exchangers	84.17
Pulverizers	84.21
Lifting and loading machinery	84.22
Earth moving equipment	84.23
Agricultural machinery	84.24.25
Food processing machines	84.30
Looms	84.36-37-38-39-40
Steel mill and foundry equipment	84.43
Rolling - mill equipment	84.44
Machine tools	84.45
Tool rigs and fixtures	84.48
Typewriters and calculating machines	84.51-52
Machinery for sorting, preparing ores and non-metallic minerals	84.56
Valves	84.61
Transmission and gear boxes and parts	84.63
Electricity, liquid and gas flowmeters	90.26
Medical, surgical, dental and veterinary instruments	90.17-18-19-20

b. Capital goods which it is necessary to produce:

The investments to be made in the first plan period will be devoted to the production of the machinery and tools shown in Table 219. Outside of these, private capital may select what capital goods it wishes to produce.

c. The present manufacturing capacity in machinery, tools and equipment, shown in Table 220, is based on the values given by industrialists registered with the "Industrial Register of the Ministry of Industry."

d. Manufacturing Possibilities

(1) In complete manufacture, either the whole product or the greater part of it is manufactured in the country. Components which cannot be maunfactured economically or for whicn demand is small can be imported.

(2) Products which cannot be manufactured in their entirety because demand is small and large investments would be required will in the beginning, be manufactured by assembling parts imported on C.K.D. basis with home-produced complementary parts. Products which it is not possible to manufacture integrally because technical knowledge is lacking will also be manufactured by assembly. Internal production, after being started on this basis, will be developed according to a program so that the indigenous content of the product will reach a certain percentage within a given time and assembly is finally wholly replaced by domestic manufacture.

e. Technical Know-How and Experience

Acquiring technical know-how and experience, developing new manufactures, and training skilled and qualified personnel in sufficient numbers involves extensive studies and long preparation. In the meanwhile, in order to utilize to the best the time spent on these studies and preparations, and so that insufficiency in trained and qualified personnel does not slow down development, manufacturing will be undertaken under licence and on the basis of technical cooperation.

TABLE 220 — Capacity in Machinery Industry, end 1960
Source : Industry Section, Ministry of Industry

Items	Capacity (Thousand Units)
Diesel engines	3.5
Turbines	1.5
Looms	1.0
Gins	0.6
Bobin-winding machines	0.7
Feeders	1.0
Dobbies and doublers	0.2
Measuring and doubling machines	0.1
Dyeing and finishing equipment	0.2
Drying machines	0.002
Stocking knitting machines	0.2
Cotton seed sieves	0.02
Wool and cotton scouring machines	0.008
Machinery for preparing yarns for weaving	0.03
Loom let-off mechanism	0.05
Dye pasting cylinders	0.008
Cotton bale press	0.004
Machines for making paper bags	0.01
Printing machines	0.05
Oil presses	0.2
Milling equipment	0.09
Miscellaneous baking equipment	0.3
Machinery for closing cans	0.01
Rice husking equipment	0.004
Complete rice equipment	0.005

TABLE 220 cont'd — Capacity in Machinery Industry, end 1960

Items	Capacity (Thousand Units)
Vegetable oil refining apparatus	0.005
Gear boxes	0.03
Fire extinguishers	3.0
Water purification equipment	0.01
Water meters	40.0
Centrifugal pumps	0.7
Hand pumps	7.7
Motor pumps	0.4
Deep well pumps	0.1
Spray pumps	0.03
Crushing machines	0.05
Cranes	0.4
Cyinders	0.1
Concrete mixing machines	0.07
Briquetting machines	0.05
Tille making machines	0.2
Brick making machines	0.05
Nail making machines	0.05
Screw cutting machines	0.2
Construction hoists	0.04
Conveyors	0.005
Woodworking planers	0.8
Rough planers	0.2
Band saws	1.0
Milling machines	0.07
Drills	0.09
Log sawers	0.002
Other milling machines	0.05
Grindstones	0.2
Refrigerators	7.5
Commercial refrigerators	1.0
Washing machines	4.8
Vacuum cleaners	6.0
Driers for hairdressers	2.4
Sewing machines	62.1
Cash registers	0.07
Typewriters and calculating machines	8.2
Table scales	33.8
Hand scales	0.2
Scales	0.9
Truck scales	0.04

Note: Current capacities may be somewhat above the figures given here, which reflect the capacities reported at the time of establishment.

TABLE 221 — Value of Imports and Demand and Manufactures' Sales of Machinery, Tools and Equipment

	Imports 1959-61 Average (Thousand $)	Demand (Million TL.)			Production (Million TL.)		
		1962	1963	1967	1962	1963	1967
Internal combustion engines	4 400	57.0	61.0	308.0	1.5	4.5	290.0
Pumps	1 557	5.3	5.9	10.1	3.0	4.3	9.1
Machine tools	3 251	40.0	48.7	60.8	5.0	33.9	52.8
Presses and rolling-mills	307	4.0	10.0	13.0	1.5	5.0	6.5
Wood working machines	402	10.0	13.9	18.4	4.0	11.6	15.3
Steam boilers	1 699	22.0	24.9	36.4	5.0	8.0	29.7
Hydraulic turbines	703	9.0	10.2	14.9	0.2	1.0	12.0
Fans	1 017	13.0	14.7	21.6	0.5	2.3	17.0
Air and gas compressors	555	6.4	7.2	10.5	—	—	8.5
Furnaces and automatic burners	180	2.3	2.6	3.0	0.1	0.5	2.4
Industrial furnaces	885	11.5	13.0	19.0	0.1	1.0	15.0
Pulverizers	519	6.7	7.6	11.1	5.0	7.6	11.1
Lifting and loading machinery	3 507	45.5	51.5	75.5	5.0	10.0	60.0
Transmissions and gear boxes	412	5.3	6.0	8.7	0.5	1.2	7.0
Earth moving equipment	8 415	109.3	123.6	181.0	—	—	120.0
Food processing machines	651	8.5	60.0	75.0	3.0	12.0	37.5
Looms	9 428	80.0	64.0	104.0	1.0	10.0	80.0
Steel mill and foundry equipment	776	10.1	11.4	16.7	1.0	2.0	8.0
Tool rigs and fixtures	363	4.7	5.3	7.7	—	—	7.0
Heat Exchangers	2 588	37.0	41.8	61.2	2.4	8.0	42.0
Typewriters and computing machines	1 090	14.1	15.9	23.2	—	—	16.0
Machinery for sorting and preparing ores & non-metallic minerals	3 011	39.1	44.2	65.0	2.0	2.0	54.0
Valves	599	7.8	8.8	12.8	0.5	1.8	9.0
Liquid and gas flowmeters	216	9.0	9.5	12.0	6.0	6.6	10.0
Medical equipment	1 261	20.0	33.0	40.0	—	1.0	32.0
Irrigation & sprinkling equipment	—	3.0	4.0	80.0	—	—	80.0
Refrigerators	30	65.0	77.9	139.4	60.0	77.9	139.4
Refrigerator parts	1 381	17.9	20.8	37.7	—	5.0	37.7
Sewing machines	2 619	45.0	49.2	55.7	25.0	44.8	51.2
Washing machines	—	14.0	15.4	22.5	14.0	15.4	22.5
Other domestic manufactures	6 685	237.0	268.4	393.0	100.0	115.0	340.0
TOTAL	**58 527**	**959.5**	**1130.5**	**1937.9**	**246.3**	**392.4**	**1622.7**

DEMAND AND PRODUCTION ESTIMATES

a. The estimated value of the production of machinery, tools and equipment manufactured at present or which will be shortly manufactured in the country are given in Table 221. Import prices are inclusive of custom duties; for domestic products, ex-factory prices are given.

b. Machinery equipment to be manufactured in the country :

The supply and demand position of the items listed in Table 221 is outlined briefly below.

(1) Internal combustion engines :

Four groups are distinguished in internal combustion engines, according to displacement volume and usage. The demand for each group has been considered separately in Table 222.

TABLE 222 — Demand for Internal Combustion Engines (*)
(Thousand Units)

Type of Engine	1962	1963	1967
Small and light engines, displacement 0.1-1 lit/cylinder	17.6	18.8	25.7
Automotive engines, displacoment 0.2-1.5 lit./cylinder ...	15.0	7.1	15.9
Industrial engines, displacement 0.5-3 lit./cylinder	9.0	9.7	12.2
Heavy duty engines, displacement 5 lit./cylinder and larger	—	0.2	0.3
Grand Total	**41.6**	**35.8**	**54.1**

Turkey's annual production capacity in diesel engines, on the basis of 300 eight-hour days, is of 900 diesel engines of up to 15 HP. (with an indigenous content of 80 per cent). In addition, some internally manufactured parts are assembled with imported components into complete engines. The demand in excess of this production is met by imports.

A great part of the raw materials entering into the manufacture of internal combustion engines exists in the country. Certain parts which require high precision manufacturing have to be imported.

Excess capacity in the shipyards and workshop of the Navy, the Maritime Bank and the State Railways will be used to start the manufacture of heary duty diesel engines in 1963.

It is intended to set up combined plants for the manufacture of several parts of gasoline and diesel engines other than the heavy diesels mentioned above.

(2) Pump Manufacturing Industry

Demand estimates were based on requirements for pumps used in irrigation. The requirements shown in Table 223 were calculated with reference to the 1970 targets set for motor pumps in the agricultural program and on the basis of a maximum service of nine years. At present, about fifteen plants are manufacturing pumps. Total demand may be met by expanding these outfits.

TABLE 223 — Irrigation Pump Requirements **(Thousand Units)**

Years	Units
1962	7.0
1963	7.9
1967	16.5

(*) Engines imported together with finished products are included in this demand.

(3) Machine Tools

Requirements were estimated by taking into account past relationships between GNP and investments in machine tools. Stress was laid on import substitution. Today various firms and crafts schools are manufacturing machine tools. In addition to these, the Machinery and Chemical Industry will undertake the manufacture of special purpose and high precision machine tools. Requirements in machine tools are shown in Table 224.

TABLE 224 — Machine Tool Requirements (Units)

	1962	1963	1967
Lathes	860	900	1 100
Planers	60	65	75
Milling machines	90	100	160
Drills	620	700	1 150

(4) Wire Drawers and Presses and Rolling Mills

The demand for wire drawers and presses was estimated in terms of their import values. As quantity and size depends on the designs to be implemented and as sizes vary greatly, no quantitive estimate was attempted in this respect.

Various concerns are manufacturing wire drawers and presses and their components. Special and high capacity types will be manufactured by the Machinery and Chemical Industry.

Rolling mills are manufactured in the country, but quality standards need to be raised. The Machinery and Chemical Industry and the Iron and Steel Works will give consideration to this problem.

(5) Wood-Working Machines

Requirements were calculated in the light of the forestry sector estimates as to the quantity of timber which it will be possible to machine. Table 225 shows requirements in wood working machines.

The stock available for machining will increase yearly by 5.4 per cent.

Wood-working machines are manufactured in the country and except for very special types, requirements can be met entirely from domestic sources.

TABLE 225 — Requirements in Wood-Working Machines (*) (Units)

	1962	1963	1967
Lathes	40	42	55
Saws	840	900	1 180
Planers	850	900	1 170

(*) Import-replacing machines.

(6) Food processing machines

Requirements in food processing machines were estimated with reference to the developments anticipated in the food sector. Some of these machines are manufactured in the country. Efforts will be made to manufacture internally all food processing machines other than those of a special type.

(7) Textile Machines

Requirements in this field were estimated with regard to probable developments in the textile industry. Some types of machine and equipment are manufactured in the country. The manufacture of other types will be given consideration.

(8) Steam Boilers and Gas Ranges

Fire-tube boilers are now manufactured in Turkey. Internal manufacture of high pressure and water-tube boilers, steel grates, stokers, bins and other parts should be undertaken. Such parts as trommels, high pressure water pumps, control instruments and steam valves which are difficult to manufacture internally will be imported and assembled with the complementary indigenous parts.

Production in association with foreign companies experienced in this field may be considered. Gas hot plates and gas ranges have been manufactured on order in Turkey. The manufacture of gas ranges and high pressure steam boilers will be given consideration.

(9) Hydraulic turbines

Hydraulic turbines are generally designed with regard to the head and flow rate under which they are required to operate and are therefore custom-manufactured.

Smaller sizes can be serialized. It is intended to manufacture small and medium size hydraulic turbines in the plan period. Several parts of large turbines can be manufactured internally.

Turkey has an immense potential of water resources. This fact alone justifies the importance attached to the manufacture of hydraulic turbines.

(10) Fans

Various types of fans are being manufactured at present. All kinds of ventilating equipment can be produced by existing facilities, but designs must be given greater attention.

(11) Air and gas compressors

Air and gas compressors are not manufactured in Turkey. In view of the fact that the demand for compressors will grow in the coming years, a new plant will be set up to manufacture the types in current use.

(12) Burners

Since it is planned to use fuel oil instead of lignite in central heating in order to reduce air pollution, the demand for automatic oil burners will rise steeply. To meet this demand, consideration will have to be given to the manufacture of burners in the first five year period.

(13) Industrial furnaces

Present facilities will suffice to manufacture these furnaces. Special control and regulating instruments, however, must be imported.

(14) Pulverizers

There will be a large demand for pulverizers which are used both in agriculture and in the construction sector. Certain types are being manufactured internally. The manufacture of other types will be considered.

(15) Lifting and loading machinery

Certain lifting and loading machines, and elevators, hoists and conveyors are manufactured in the country. All the equipment required in this field should be manufactured domestically.

(16) Road construction and mining equipment

Production will begin on the basis of the assembly of imported parts and the percentage of the indigenous content will be gradually increased.

Engines for constructional and mining equipment will be manufactured internally by the motor industry which it is intended to be set up.

(17) Steel mill and foundry equipment

It is aimed to manufacture heat treatment ovens, furnaces, cupolas, and casting equipment in the country on a custom-made basis. The necessary measures will be taken to meet requirements fully from internal sources.

(18) Machine tools

The firms which manufacture machinery and tools for working wood and similar materials should undertake the manufacture of machine tools.

(19) Heat exchangers

This category of apparatus is being manufactured in the country. Only certain measuring and regulating instruments have to be imported.

(20) Typewriters and calculating machines

It is possible to begin to make typewriters and calculating machines by assembling imported with locally manufactured parts. If it is aimed to attain a given percentage of indigenous content in the manufacture of these articles by the end of plan period.

(21) Machinery for sorting and preparing ores, earth, and non-metallic minerals

Crashers, sifters and the like are manufactured internally. For certain special equipment, original designs of patents must be provided.

(22) Valves

Low pressure valves are manufactured internally. It is envisaged to extend production to high pressure and special feature valves.

(23) Transmissions and gear boxes

Transmissions and gear boxes, which are important parts of various types of machinery, must be produced in association with gears. Demand for these articles will grow considerably after transport vehicles and agricultural machinery begin to be manufactured internally.

(24) Liquid and gas flowmeters

Demand for water and gas meters has increased with the growth of subscribers. Water flowmeters are manufactured internally. The manufacture of gas flowmeters is being considered.

(25) Medical and hygienic equipment

The demand for medical equipment shown in Table 221 relates to the medical, surgical, dentistry and veterinary equipment and instruments which will be needed by the hospitals and dispensaries to be opened to service in the plan period and to missing equipment and instruments of existing institutions.

The requirements of private hospitals and doctors' private consulting rooms were also taken into account. With regard to manufacture, these instruments and equipments are divided into two groups : (1) those which can be produced integrally in the country and (2) those which are produced mainly on the basis of assembly of imported parts. In production on assembly basis, the aim is to attain a given percentage of indigenous content by a certain period.

60 per cent of all equipment and instrument requirements of hospitals are at present manufactured in the country. Table 221 shows the import value of the equipment which cannot yet be manufactured internally.

(26) Irrigation and sprinkling sets

The need for sprinkling sets for irrigation, which has been duly stressed in the agricultural section, will amount to 25 000 sets by 1970. To supply this, facilities with a manufacturing capacity of 5 000 sets per annum must be set up.

(27) Refrigerators and their parts

Demand for household refrigerators (shown in Table 226), was estimated by comparing the number of household electricty subscribers and the estimated demand for refrigerators in the same year. Some parts are manufactured internally and assembled in the country. The firms engaged in this line of production are able to meet domestic requirements.

With the internal manufacture of certain parts which are presently imported, the indigenous content of refrigerators can be raised to 90 per cent by 1967. Measures to this effect will be taken.

TABLE 226 — Estimated Demand for Refrigerators (Thousand Units)

	1962	1963	1967
Household refrigerators	16.0	19.0	34.0
Commercial "	1.6	1.9	3.4

(28) Sewing Machines

The demand for sewing machines shown in Table 227 is derived from the market studies carried out by the private sector.

Certain parts of household sewing machines are manufactured domestically and assembled with imported parts. The aim is to manufacture internally the parts that are presently imported as well as to engage in the manufacture of commercial type sewing machines.

TABLE 227 — Demand for Sewing Machines (Thousand Units)

	1962	1963	1967
Demand for Sewing Machines	50.0	56.0	64.0

(29) Washing Machines

The demand for washing machines is shown in Table 228. Various firms are engaged in this line of production. The parts that are presently imported should be manufactured internally.

TABLE 228 — Demand for Washing Machines (Thousand Units)

	1962	1963	1967
Washing Machines	9.0	10.3	15.0

FOREIGN TRADE

Foreign exchange requirements for imports in the machinery industry are shown in Table 229.

TABLE 229 — Foreign Exchange Requirements in the Machinery Industry (CIF — Million TL.)

	1963	1964	1965	1966	1967
Imports of Investment Goods	120	110	105	60	240
Imports of raw and auxiliary Materials	62	95	164	200	210
TOTAL	**182**	**205**	**269**	**260**	**450**

VALUE ADDED

Value added in the machinery industry is shown in Table 230.

TABLE 230 — Value added in the Machinery Industry (*) **(Million TL.)**

	1962	1963	1964	1965	1966	1967
Value added	123	190	367	562	735	821

(*) Excluding electrical and agricultural machinery.

INVESTMENTS

Some branches of the machinery industry show surplus capacity. 1,038.5 million TL., of which 650 million TL. in foreign ecxhange, will be spent on the complementary machinery and equipment needed to utilize this idle capacity and on new facilities. In 1967, an investment of 300 million TL. has been set aside for preparations leading to the manufacture of the capital goods which it is intended to produce in the second five-year plan period. Investments in the machinery manufacturing industry are shown in Table 231.

TABLE 231 — Investments in the machinery industry

(Million TL.)

	1963	1964	1965	1966	1967	Total
Investments	176.6	165.6	160.6	100.6	435.1	1 038.5

MEASURES

a. Care will be taken to avoid making investments which might lead to excess capacity in the already established branches of industry and in those which will be set up. Regulatory imports will only be resorted to in the case of difficulties arising with regard to price and quality.

b. Domestic production which is satisfactory with regard to quality and price will be protected for a suitable period of time until it is able to compete with foreign goods. The necessary measures will be taken to enable domestic production to reach competitive status in a short time.

c. Cooperation should be established between the Ministry of Industry, the Technical Universities and Schools, the Chambers of Engineering and Architecture, the Standards Institute and the Union of the Chambers of Commerce, Industry and Trade Exchanges with a view to providing guidance to the industry and assistance in matters of price and quality and to obtaining the necessary information.

d. Measures will be taken to ensure that manufacturers guarantee their products and to simplify this procedure.

e. In using project-bound foreign assistance, means will be sought to utilize internal capacity to the full.Even if the project is commissioned to foreign firms, these firms will be urged to use the parts that can be produced and will be custom-manufactured for them in Turkey.

f. Industrial statistics will be prepared so as to cover a wider range of manufactures and to include more extensive data.

g. Separate data on the manufacturing activities of the public and private sectors will be issued by the relevant agencies.

h. Necessary measures will be taken to develop small-scale industry and to establish fruitful cooperation between small and large industry.

i. The following measures will contribute to the utilization of excess capacity: (1) reorganizing State Economic Enterprises and (2) granting priority to investments and projects designed to utilize excess capacity.

j. Components of factories and facilities which can be manufactured internally will not be imported. In order to ensure that these parts are manufactured internally, the following measures should be taken:

(1) In commissioning projects, even if the contract is awarded as a whole, any parts which are capable of being produced internally and have been ascertained to be satisfactory with regard to both quantity and quality will be included in the specifications;

(2) Manufacturers' associations should keep informed of proposed investments and contracts and circulate this information among their members;

(3) Manufacturers should bring the items they are producing or are about to produce to the notice of the circles concerned.

PRODUCTION OF ELECTRICAL MACHINERY, APPLIANCES AND ELECTRICAL MATERIALS

BASIC PRINCIPLES AND METHODS

a. The machinery and equipment produced in this sector are investments goods. In view of their importance in a developing economy, the domestic production of these goods must clearly take priority. However, since present technological levels are expected to improve in the future, the production of large machines and high-precision equipment will be postponed to the following plan periods.

b. Demand was estimated separately for the different products.

(1) Demand estimates for electric motors were based on estimates of electric power consumption in industry. The motor power that will be needed to meet this consumption was calculated with regard to hours of use.

(2) Generators were studied under three groups :

(a) Small generators include those of less than 15 kw. It was considered that these could be produced in association with electric motors.

(b) Medium generators, include those of 15 to 500 kw. power. Demand for these generators will be met by transferring generators from sites which are already interconnected with network systems, or will be solater, to places where they are needed.

(c) Demand for large generators was derived from the demand estimates made for electricity sector.

(3) Demand estimated for transformers were made for each of the following groups :

(a) In the case of transformers for distribution networks, total electric energy and the network capacity required for the distribution of highest power were considered.

(b) For power station transformers, demand was estimated with reference to the new power stations to be built or those to be extended.

(c) In the case of transformers for transmission networks, the same method was used as in the case of transformers for distribution networks.

(4) Electric Cables

(a) High and low tension electric cables

It was considered that high tension overhead lines would be laid in the coming years, particularly in cities. Minimum cable requirements were computed by assuming 500 m. high tension underground cable and 400 m. low tension underground cable per transformer.

(b) Requirements in installation cables (such as NGA, NSH, NPA, MHN, NBU) were calculated on the basis of the increase of electricity subscribers for household, commercial and industrial use.

(c) Demand for telephone cables was estimated on the basis of the expected capacity increases of urban telephone networks.

(5) Demand for electric meters was estimated according to the increase of electricity subscribers.

(6) Telecommunications Industry

Requirements in telephone apparatuses and switchboards were estimated according to the relationship between the total number of subscribers (including those on the waitinglist) and GNP. The income elasticity of demand is 1.87. Real demand was based on the calculations of the Post, Telephone and Telegraph Administration.

(7) Demand estimates for other devices of electricity distribution and transmission networks (circuit breakers, section isolators, distribution and control panels, switches, street lamps, high and low resistance cable headings) were based on the estimated number of transformer stations and the amount of equipment calculated to be necessary for the transmission and distribution of this energy.

(8) Internal Installation Equipment

Demand estimates for Peschel and Bergman pipes, fuses, keys, sockets, junction boxes, clemans-keys, outlets, bells, push buttons and globes were based on the expected increase of electricity subscribers.

(9) In estimating the demand for durable consumer goods, import figures and various market studies were used.

PRESENT SITUATION

a. Demand

The larger part of the demand for electrical machinery and equipment is met by imports. As some of the transformers, electric motors and other equipment manufactured in the country are comparable in quality to the corresponding import goods, the development of the industry is expected to show a rapid increase as a result of the measures to be taken.

b. Capacity

The capacity of the plants listed in 1960 in the industry register is shown in Table 232.

TABLE 232 — Manufacturing Capacity in Electrical Machinery and Equipment

Items	Manufacturing Capacity	
Electric meters	10.0	(Thousand units)
Generators	—	(—)
Transformes		
(400 step-down transformers of 250 KVA)	100.0	(Thousand KVA)
Electric Cables		
High and low tension cables	—	
Internal installation cables	66.1	(Thousand Km.)
Elevator and welding cables	0.3	(" ")
Telephone cables	—	
Watt meter	—	
Industrial telecommunication equipment		
Radio broadcasting equipment and wireless	0.5	(Thousand units)
Electricty Distribution and Transmission Network		
Switches	90.5	(" ")
Switchboards	2.4	(" ")
Fuses	5.0	(" ")
Street lamps	10.0	(" ")
Internal installation material		
Electric bells	360.0	(Thousand units)
Plugs and outlets	1 725.0	(" ")
Puses	5.0	(" ")
Bakelite electrical fittings	4 346.6	(" ")
Electric wire conductors	15.7	(Thousand Km.)
Durable consumer goods		
Rectifiers	1.4	(Thousand units)
Electric irons	37.5	(" ")
Electric heaters	50.0	(" ")
Radios	339.5	(" ")
Record-players	41.0	(" ")
Amplifiers	3.1	(" ")
Projectors	0.2	(" ")
Electric light bulbs	7 000.0	(" ")
Fluorescent strip light fixture	74.0	(" ")
Vacuum cleaners	6.0	(" ")
Electric fans	2.4	(" ")
Electric grills	44.2	(" ")
Electric hot-plates	57.0	(" ")
Electric tea and coffee-pots	38.5	(" ")
Ceiling, wall and desk lamps	105.3	(" ")
Batteries and cells		
Batteries	114.0	(Thousand units)
Telephone cells	150.0	(" ")
Battery of cells	801.9	(" ")
Torch light cells	14 550.0	(" ")

DEMAND PROJECTIONS

The demand for electrical machinery and equipment is shown in the following tables.

TABLE 233 — Demand for Electrical Machinery and Equipment

Items	Unit	1962	1963	1967
Electric motors	Thousand	30.0	43.0	72.0
Power transformers	"	0.4	0.5	0.9
	" MVA	0.2	0.2	0.8
Other transformers	"	240.0	250.0	336.0
High tension underground cables	Km.	150.0	168.0	336.0
Low tension underground cables	"	120.0	130.0	260.0
Interior telephone fixtures and cables	Thousand Km.	4.0	23.4	24.0
Electric meters	Thousand	144.5	155.0	177.0
Telephone apparatuses	"	5.0	62.0	62.0

TABLE 234 — Demand for Electricity Distribution and Transmission Network Equipment

(Thousand units)

Items	1962	1963	1967
Circuit breakers	0.3	0.4	0.6
Section isolaters	0.6	0.8	1.4
Distribution and control panels	0.2	0.5	0.7
Switches	2.8	3.2	5.3
Fuses	12.0	13.0	21.2
Street lamp equipment	12.0	13.0	15.0
High tension cable headings	4.3	4.7	8.9
Low tension cable headings	0.8	0.9	1.8

TABLE 235 — Demand for Electrical Internal Installation Equipment

Items	Unit	1962	1963	1967
Peschel or bergman pipes	Thousand Km.	8.0	9.0	10.6
Fuses	Thousand units	350.0	393.0	510.6
Keys	"	900.0	1 050.0	1 240.0
Junction boxes	"	900.0	1 050.0	1 240.0
Sockets	"	900.0	1 050.0	1 240.0
Clemans-keys	"	900.0	1 050.0	1 240.0
Plugs	"	280.0	302.0	314.0
Bells	"	70.0	75.0	85.0
Push buttons	"	70.0	75.0	85.0
Globes	"	70.0	75.0	85.0

TABLE 236 — Demand for Durable Consumer Goods (Thousand units)

Items	1962	1963	1967
Radios	266.0	280.0	589.0
Electric bulbs	13 700.0	14 700.0	19 450.0
Vacuum cleaners	7.0	8.0	13.0
Electric irons	100.0	110.0	150.0
Electric razors	25.0	27.0	40.0
Electric grills	30.0	34.0	50.0
Electric fans	8.0	8.5	12.0
Ceiling and desk lamps	30.0	40.0	60.0
Fluorescent lamps	50.0	62.0	74.0
Electric hot-plates	17.0	20.0	32.0
Electric heaters	2.5	4.0	10.0
Electric tea and coffe-pots	3.0	4.0	8.0

TABLE 237 — Production Value of Electrical Machinery (Million TL.)

Items	1962	1963	1967
Electric motors and generators	—	8.0	25.0
Power transformers	1.6	14.0	26.0
Other transformers	9.6	10.0	12.2
High and low tension cables	—	—	38.1
Installation cables	38.4	46.8	56.0
Telephone and telegraph cables	—	—	14.0
Electric meters	—	—	11.5
Telephone switchboards	—	—	38.8
Telephone apparatus	—	—	6.4
Distribution & transmission network equipment	10.0	11.9	24.3
Radios	100.0	126.2	264.5
Internal installation equipment & others	30.0	35.0	53.0
TOTAL	**189.6**	**251.9**	**569.8**

The manufacture of high and low tension cables, telephone and telegraph cables, electric meters, telephone equipment and switchboards will start in 1964.

INVESTMENTS

Investments in the production of electrical machinery and equipment will amount to 244 million TL., of which 81.8 million will be in foreign currency.

TABLE 238 — Investments in Electrical Machinery and Equipment

(Million TL.)

Items	1963	1964	1965	1966	1967
Electric motors	13.0	8.0	4.0	—	—
Transformer stations	10.0	5.0	—	—	10.0
Electric meters	6.0	4.0	—	—	—
Cables	20.0	10.0	—	—	—
Telephone factory	12.0	2.0	—	12.0	1.0
Electric network equipment	15.0	15.0	—	—	10.0
Telephone cables	10.0	5.0	—	—	—
Others	10.0	15.0	12.0	10.0	25.0
TOTAL	**96.0**	**64.0**	**16.0**	**22.0**	**46.0**
GRAND TOTAL					**244.0**

VALUE ADDED

The value added by the electrical machinery industry is shown in Table 239.

TABLE 239 — Value added in Electrical Machinery Industry

(Million TL.)

Items	1962	1963	1964	1965	1966	1967
Electric motors	—	4.4	9.8	10.3	11.3	12.4
Power transformers	0.8	8.1	11.0	12.4	11.8	14.7
Other transformers	4.8	5.0	5.3	5.5	5.8	6.1
High and low tension cables	—	—	10.2	10.9	14.9	19.4
Installation cables	21.0	25.9	26.3	27.8	28.8	26.5
Telephone cables	—	—	11.6	11.0	9.7	9.3
Electric meters	—	—	8.4	8.4	9.0	7.9
Telephone apparatus and switch. boards	—	—	37.0	37.0	38.3	30.1
Electric distribution and transmission network equipment	7.8	8.7	11.8	12.6	15.6	19.0
Radios	15.0	20.0	35.0	50.0	68.0	95.0
Internal installation equipment and others	12.0	14.0	15.0	16.5	18.0	20.0
TOTAL	**61.4**	**86.1**	**181.4**	**202.4**	**231.2**	**260.4**

FOREIGN TRADE

The yearly value of imports of investment goods and raw materials for this sector and of import substitution in the case of internally manufactured investment goods is shown in Table 240.

MEASURES

a. A control mechanism will be set up as soon as possible to guarantee the quality of domestic raw and auxiliary materials.

b. Imports of home-produced machinery, tools and equipment which is satisfactory with regard to both quality and prices will be prohibited.

c. It is envisaged to manufacture high power and voltage transformers in the country.

d. Export possibilities will be sought for the electrical machinery and equipment which is to be manufactured.

TABLE 240 — Balance of Payments Effects of the Electrical Machinery Industry

(CIF Million TL.)

	Value of capital good import requirements for new investment					Value of raw material import requirements					Value of manufactures replacing imported capital goods				
	1963	1964	1965	1966	1967	1963	1964	1965	1966	1967	1963	1964	1965	1966	1967
Electric motors and generators	6.0	4.0	2.0	—	—	1.3	2.9	3.5	3.8	4.2	6.0	14.0	16.6	18.2	19.2
Transformers	3.0	2.0	—	—	3.0	1.5	1.6	1.8	1.9	2.1	7.0	7.3	7.8	10.0	14.0
Electric meters	2.0	1.0	—	—	—	—	0.3	0.6	0.6	0.6	—	3.8	7.7	7.8	7.0
Cables	5.0	5.0	—	—	—	1.0	1.0	0.7	—	—	—	10.5	22.9	30.2	38.4
Telephone apparatuses and telephone switchboards	5.0	—	—	10.0	—	—	1.0	18.0	18.0	9.5	—	3.0	40.0	40.0	40.0
Telephone and telegraph cables	4.2	1.8	—	—	—	—	0.3	0.5	0.5	0.5	—	6.6	12.6	11.2	10.7
Electricy network equipment	1.0	0.4	—	—	0.4	0.2	1.0	1.0	1.0	2.0	1.5	4.7	5.7	6.8	8.0
Radios	3.0	3.0	3.0	3.0	3.0	100.9	115.2	116.0	115.0	106.0	—	—	—	—	—
Electrical equipment	5.0	3.0	2.0	2.0	6.0	6.0	6.2	4.0	4.2	4.5	—	—	—	—	—
TOTAL	34.2	20.2	7.0	15.0	12.4	110.9	129.5	146.1	145.5	129.4	14.5	49.9	113.3	124.2	137.3

AGRICULTURAL IMPLEMENTS AND MACHINERY INDUSTRY

BASIC PRINCIPLES, METHODS AND TARGETS

Agriculture in Turkey is still carried out with primitive methods and equipment. It is essential to do away with these primitive methods which are the main cause of low yields.

Agricultural equipment and machinery, including tractors, are relatively easy to produce with present techniques. Consequently, if full use is made of both idle capacity and the manufacturing experience acquired, there should be no difficulty in producing tractors and other agricultural equipment.

PRESENT SITUATION (1960)

Table 241 gives the number of tractors and other equipment in use in 1960.

TABLE 241 — Number of Tractors and other Equipment, 1960 ('000 units)

Products	Numbers
Tractors	42.1
Tractors drawn ploughs	47.1
" " cultivators	20.1
" " disk-harrows	18.3
" " rakes	463.5 (x)
" " rollers	3.1
" " drills	8.3
" " harrows	18.1
Combines	5.6
Tractor drawn threshers	2.5
Selectors	11.4
Tractor drawn trailers	25.4
Animal drawn ploughs	1 147.7
" " grain drills	8.3
" " cotton seed drills	11.1
" " cultivators	20.1
Fanning mills	28.5
Animal drawn grass cutting machines	24.2
Spraying and dusting equipment	34.3

(x) Includes all kinds of rakes.

DEMAND

In estimating demand account was taken of needs in the agricultural sector and of the quantities that farmers will be able to purchase each year.

Future requirements in tractors and other equipment were calculated by considering the relationship between these goods and the tractor and equipment needs of modern agriculture.

TABLE 242 — Demand for Tractors and Farm Equipment (Value in Million TL.)

	1963		1964		1965		1966		1967	
	Units	Value	Units	Value	Units	Value	Units	Value	Units	Value
Tractors	6 000	174.0	6 000	174.0	6 000	174.0	6 000	174.0	6 000	174.0
Tractors drawn heavy ploughs	3 000	10.5	3 000	10.5	3 000	10.5	8 000	28.0	8 000	28.0
" " cultivators	2 000	5.0	2 000	5.0	2 000	5.0	2 000	5.0	2 000	5.0
" " diskharrows	—	—	—	—	1 400	4.2	1 400	4.2	1 400	4.2
" " rakes	5 000	3.8	5 000	3.8	5 000	3.8	5 000	3.8	5 000	3.8
" " rollers	750	1.5	750	1.5	750	1.5	750	1.5	750	1.5
" " drills	1 700	4.3	1 700	4.3	1 700	4.3	1 700	4.3	1 700	4.3
" " harrows	1 300	1.3	1 300	1.3	1 300	1.3	1 300	1.3	1 300	1.3
" " combines	650	22.8	650	22.8	650	22.8	650	22.8	650	22.8
" " threshers	1 500	13.5	1 500	13.5	1 500	13.5	1 500	13.5	1 500	13.5
Selectors	500	4.3	1 000	8.6	1 200	10.2	1 200	10.2	1 200	10.2
Tractor drawn trailers	2 700	18.9	2 700	18.9	2 700	18.9	2 700	18.9	2 700	18.9
Animal drawn heavy ploughs	20 000	5.0	20 000	5.0	30 000	7.5	35 000	8.7	45 000	11.3
" " grain drills	13 000	31.2	13 000	31.2	13 000	31.2	13 000	31.2	13 000	31.2
" " cotton seed drills	2 500	5.0	2 500	5.0	2 500	5.0	2 500	5.0	2 500	5.0
" " cultivators	1 500	0.5	1 500	0.5	2 000	0.7	2 000	0.7	2 000	0.7
Fanning mills	500	1.1	750	1.6	750	1.6	1 000	2.2	1 500	3.3
Animal drawn grass cutting machines	500	3.1	500	3.1	500	3.1	500	3.1	500	3.1
Rakes	20 000	10.0	20 000	10.0	30 000	15.0	35 000	17.4	45 000	22.6
Spraying and dusting equipment	—	7.0	—	7.0	—	7.0	—	7.0	—	7.0
TOTAL		**322.8**		**327.6**		**341.1**		**362.8**		**371.7**
INDEX		**1000**		**1013**		**1057**		**1124**		**1151**

PRODUCTION TARGETS

Today only 25 per cent of the demand for tractors and tractor drawn equipment is met by domestic production. But if the appropriate measures are taken, there should be no difficulty in meeting total demand from internal production.

The production targets shown in Table 243 are based on the assumption that total capacity will be utilized.

TABLE 243 — Production Targets

	1962	1963	1967
Value of Production (Million TL.)	80.7	322.8	371.7
Index	100	400	460.6

The import requirements in raw materials (and semi-finished products) implied by these targets, and imports of spare parts needed for the facilities to be set up are shown in Table 244.

TABLE 244 — Value of Import Requirements in the Sector (Million TL.)

	1962	1963	1967
Raw materials	31.6	126.5	42.2
Spare parts etc.	4.0	16.1	18.6
Total	35.6	142.6	60.8

Taking into account the above import requirements, the net value of the import substitution to be realized in this sector is shown in Table 245.

TABLE 245 — Import Substitution (Million TL.)

	1963	1964	1965	1966	1967
Import substitution	135.1	139.1	201.0	221.7	265.9

Owing to the lack of suitable foreign markets, exports are not considered at present.

VALUE ADDED

The value added was found after determining the cost elements of the products.

Value added in the sector is shown in Table 246.

TABLE 246 — Value Added (Million TL.)

	1962	1963	1967
Value added	30.7	122.9	164.9
Index	100	400	537

INVESTMENTS

Existing productive capacity for agricultural equipment and machinery is adequate and there is no need for large investments. Certain minor extensions only will be necessary in order to bring unused capacity into operation.

The most important investment in the sector will be for constructing a foundry in, and extending the machine shop of the Minneapolis-Moline Turkish Tractor Factory.

Investments in the sector will be as follows :

In domestic currency	10,000,000 TL.
In foreign currency	2,200,000 $
Total investment	**29,854,000 TL.**

This investment should be realized by the end of 1964.

MEASURES

In order to attain production targets, cooperation will be established between the following organizations :

— Mechanical and Chemical Industries

— Turkish Sugar Factories

— General Directorate of Agricultural Supplies

— Minneapolis-Moline Turkish Tractor and Agricultural Equipment.

This cooperation will be achieved through the Work Programming Board and the Joint Engineering Board.

a. Work Programing Board

The four general directors of the cooperating organizations will constitute this Board. This board will determine the amount and kinds of products to be manufactured by each organization and will take measures to eliminate any difficulties that might arise.

b. Engineering Board

Technical personnel from all the organizations concerned will attend meetings and will constitute the members of the joint Engineering Boad. The function of this board will be to implement the work program when it is determined.

In addition, the four cooperating organizations will be given the tasks of training farmers by opening courses during slack seasons, and of setting up sufficient maintenance stations.

PRODUCTION AND REPAIR OF TRANSPORT EQUIPMENT

BASIC PRINCIPLES AND OBJECTIVES

Production and repair of motorized transport equipment has been considered under four headings :

Shipbuilding

Manufacture of highway vehicles

Manufacture and repair of railroad equipment

Aircraft repair

The main objectives are the following :

a. Ships will be built in Turkey. For this, the unused capacity of present shipyards will be employed and their deficiencies will be rectified.

b. The vehicle industry will be developed, beginning with assembly and increasing gradually until manufacture takes place in Turkey.

c. Railroad equipment will be produced domestically. Parts which cannot be manufactured in Turkey will be imported.

d. Aircraft will be repaired in Turkey. For this purpose the existing jet aircraft repair shop will be enlarged and, if necessary, new shops will be established.

SHIPBUILDING INDUSTRY

BASIC PRINCIPLES AND GENERAL METHODS

The carrying capacity of the maritime fleets is in excess of 1967 demand. As a result, except for renovation and modernization of old ships, there will be no demand during the plan period.

In passenger ships, the present capacity is adequate even if old ships are taken out of service. However, any necessary investments for special requirements will be undertaken insofar as development resources are available.

Because of the technical adequacy of existing dock-yards, low costs, and because ship imports involve heavy foreign payments, the domestic construction of ships appears suitable.

Therefore ship imports will be restricted, deficiencies in shipyards will be rectified between 1963 and 1965, and thus the construction of auto ferries, floating cranes, passenger ferries, and certain freighters, (all of which are in great need) will be undertaken. After 1965 when facilities are operating at full capacity, ship requirements will be met entirely by domestic manufacture and assembly. The products of the Ereğli Iron and Steel Works, which will start production in 1965, will largely replace raw material imports. Imports of some parts not manufactured in Turkey will be necessary.

PRESENT SITUATION

a. In Table 247 a comparison is made between the amounts of steel used in foreign and domestic shipyards with equivalent capacity, establishment area, and work power. Only 20 per cent of capacity was used, and ships were imported.

TABLE 247 — Capacity of Shipyards according to the Amount of Steel which can be worked (Tons)

Name of Shipyard	Capacity Present Repair & Construction (1)	Suitable for new construction (2)	Amount of steel which could be worked by an equivalent shipyard (3)	Amount steel worked (4)	% of Utilization (4:3) (5)
Haliç	3 000	1 500	10 000	2 170	21.7
Hasköy	1 000	600	1 000	1 036	103.6
Camialti	6 000	6 000	6 000	2 000	33.6
Istinye	1 500	800	4 500	288	6.8
Gölcük	7 635	7 635	20 000	920	4.6
Taşkizak	4 500	3 300	7 800	—	—
Private Sector	1 300	1 200	2 200	—	—
T O T A L	**24 935**	**21 035**	**51 500**		

b. Construction

Table 248 shows the ships built in Turkish shipyards during 1960-1962.

TABLE 248 — Ships Built in Turkish Shipyards

Years	Name of Shipyard	Ships Constructed Name	Kind
1960	Haliç	Hürriyet	Ferry-boat for vehicles
	Haliç	Four various boats	Motorboats and barges
	Camialti	Abidin Daver	6,500 ton freighter
	Hasköy	Beykoz	Passanger ferry-boat
	Hasköy	46 motor boats	Steam . boats, flat - bottomed barges, etc.
1961	Haliç	Asfalt II	1,836 Tons
	Haliç	5 units	Tugboat
	Camialti	Camialti I	Passenger ferryboat
	Hasköy	Hasköy	Passenger ferryboat
1962	Camialti	Floating docks	18,000 Tons
	Camialti	Camialti II	Passenger ferryboat
	Haliç	4 units	Tugboats, pontoon
	Halic	Orhan Erdener	Ferryboat for vecihles
	İstinye	Maltepe	Passenger ferryboat

DEMAND PROJECTIONS

Table 249 shows the tonnage of ships which have been used for 25 years and will be withdrawn from service.

TABLE 249 — Tonnage of Ships to be withdrawn from Service

Years	To be withdrawn from service (1000 DW tons)
1962	60
1963	70
1964	60
1965	25
1966	35
1967	25
1968	40
1969	50
1970	80
TOTAL	445

Note : Because ship building requires a long preparation and construction period, figures for after 1967 are given in the table.

OUTPUT PROJECTIONS

Because of excess carrying capacity, ships taken out of service will not be replaced on a large scale until 1965. In the course of this period, shipyards will be expanded. After 1965, work will be on a larger scale. The construction program is shown in Table 250.

TABLE 250 — Shipbuilding Program (According to the starting of construction)

	1963	1964	1965	1966	1967
10 000 DWT Freighter	—	—	1	1	2
6 000 DWT "	—	—	1	2	3
3 500 DWT "	1	1	1	1	2
1 000 DWT "	1	1	2	2	2
Ferry Boat for Vehicles	3	3	2	1	1
Sea Bus	1	1	—	—	—
Floating Crane	2	1	—	—	—
Tug-boats	4	4	2	—	—
Motor lighter	1	1	—	—	—
Harbour Water Tanker	1	—	—	—	—
Harbour Tanker	1	—	—	—	—
Ferry-boat	1	—	—	—	—
Diving Boat	1	—	—	—	—

The production values of the boats to be constructed in accordance with the above program are given in Table 251.

TABLE 251 — Value of Ship Construction (Million TL.)

	1963	1964	1965	1966	1967
Value	35.1	49.8	73.8	70.0	90.0

For the realization of this construction, credits of 20 million TL. in 1963 and 1964, 35 million TL. in 1965 and 1966, and 75 million TL. in 1967 are needed.

INVESTMENTS

The necessary investments for the completion of the shipyards and for the realization of the program totals to 34.4 million TL. 7 million TL. of this is foreign payments. It is necessary that these investments should be made in 1963 and 1964; approximately 40 per cent of these investments must be completed in 1963 and 60 per cent in 1964.

The distribution of these investments by years is shown in Table 252.

TABLE 252 — Ship Construction Investments (Million TL.)

	1963	1964
Maintenance and new investments	13.8	20.6

FOREIGN TRADE

TABLE 253 — Imports of Investment Goods and auxiliary raw Materials for Ship Construction and Repair (Million TL.)

	1963	1964	1965	1966	1967
Investment goods	2.0	5.0	—	—	—
Raw and auxiliary materials	11.0	25.9	20.3	16.1	20.3
Demand not met by domestic production	4.0	—	—	—	—
TOTAL	**17.0**	**30.9**	**20.3**	**16.1**	**20.3**

VALUE ADDED

TABLE 254 — Value Added by Ship Construction and Repair (Million TL.)

	1963	1964	1965	1966	1967
Value added	19.2	19.1	32.8	43.1	55.7

MEASURES

a. Imports of ships will be stopped. Only those parts which cannot be manufactured internally, and the ships and tankers which are necessary for the economy but cannot be constructed in Turkey will be imported.

b. A shipbuilding organization will be established. Until this organization is established, a coordination commission to be set up with the participation of the relevant agencies will direct ship construction.

c. In order to enable shipowners to purchase ships built in Turkey, a mechanism will be established to provide credit at the commencement of construction.

d. A system of supervising ship construction, which is approved by registration and classification institutions, will be set up.

MANUFACTURE OF VEHICLES

BASIC PRINCIPLES AND METHODS

a. Trucks : Present truck capacity is very high in relation to cargoes to be carried by road, and ruinous competition exists in this field. The liberalization of imports in this field gives rise to the expenditure of much foreign exchange. For this reason, necessary truck capacity and numbers were calculated so that the 1965 truck utilization rate would be 1.2 times that of 1960 and subsequent additions to the pool would not disturb this ratio. It was visualized that trucks would be scrapped within a maximum of twenty years. In meeting the demand for trucks, imports of complete trucks will be stopped, the percentage of domestically produced components will increase annually, and will be raised by 1967 to a level to be fixed and announced. Measures will be taken to do this in stages and prevent a decline in the utilization of truck capacity.

b. Buses : Taking into account increases in passenger transportation and in internal tourism and the fact that in summer buses operate at almost full capacity, a 10 per cent annual increase in the bus pool was accepted. Consideration was given to replacing buses to be retired from service each year within a maximum life of 20 years.

Bus needs will be met on the basis of domestic manufacture and assembly. Taking into consideration the need to develop an experienced body work industry, it was accepted as necessary to raise the ratio of domestically produced parts and components in 1967 to a level to be fixed and announced and to adopt measures which would assure that this was done in stages.

c. Automobiles : Because passenger cars are a luxury consumer durable good, it has been agreed that only the minimum demand will be met until the percentage of domestically produced components reaches a certain level within the plan period. Therefore it was agreed that the average annual increase in the pool during the first plan period would continue at the rate prevailing during the period 1953-59, and thereafter at a higher rate.

PRESENT SITUATION

The number of vehicles which could be assembled during 1961 on the basis of an eight hour-day and a work month of 30 days is shown below. The domestic compoment is 37 per cent for trucks and 25 per cent for passenger cars.

TABLE 255 — Capacity and Production (Thousand units)

	Capacity	1960 Production
Trucks and pickups	10.8	2.2
Buses and microbuses	1.4	—
Jeeps and passanger cars	8.5	1.7
T O T A L	20.7	3.9

About 20 per cent of capacity was used.

DEMAND PROJECTIONS

Minimum vehicle requirements are shown in Table 256. If the local component of vehicles does not exceed a certain ratio, steps will be taken to prevent the supply of vehicles in greater numbers, either by assembly or by imports. Moreover, measures will be taken to prevent the realization of excessive and monopoly profits arising from these restrictions.

TABLE 256 — Vehicle Requirements (Thousand Units)

	1962	1963	1964	1965	1966	1967
Jeeps and passenger vecihles	5.9	6.4	6.9	7.1	7.5	8.0
Trucks and pickups	5.0	2.0	2.5	3.8	8.9	9.6
Buses and microbuses	2.1	2.2	2.4	2.6	2.7	3.0

TABLE 257 — Growth of the Vehicle Pool (Thousand Units)

	1962	1963	1967
Trucks and pickups	63.1	61.1	67.6
Buses and microbuses	13.3	14.6	21.4
Jeeps and passager vehicles	50.6	53.3	65.3

PRODUCTION PROJECTIONS

The value of ex-factory sale will be as shown below if the demand figures given in Table 256 are met by domestic manufacture and assembly.

TABLE 258 — Value of Vehicle Sales (Million TL.)

	1962	1963	1967
Trucks and pickups	65.0	106.3	468.9
Buses and microbuses	5.0	50.0	270.1
Jeeps and passenger vehicles	39.0	67.6	78.0
T O T A L	109.0	223.9	817.0

INVESTMENTS

Fixed investments of 197 million TL. are needed to develop present facilities for the production of vehicles and body-work. 113 million TL. of this is foreign exchange. The distribution by years of the fixed and working capital investments are shown in Table 259.

TABLE 259 — Investment and Working Capital (Million TL.)

	1963	1964	1965	1966	1967
New Investments	20	55	62	40	20

FOREIGN TRADE

TABLE 260 — Imports of Investment Goods, Raw Materials and Auxiliary Goods (Million TL.)

	1963	1964	1965	1966	1967
Investment goods	13.0	40.0	40.0	25.0	15.0
Raw materials and auxiliary goods	257.5	206.6	165.5	175.0	170.0
TOTAL	**270.5**	**246.6**	**205.5**	**200.0**	**185.0**

VALUE ADDED

Table 261 shows the value added in the production and assembly of vehicles.

TABLE 261 — Value Added in Vehicle Production (Million TL.)

	1962	1963	1967
Trucks and pickups	27.0	42.3	311.9
Buses and microbuses	1.7	15.0	180.0
Jeeps	12.6	25.8	46.0
TOTAL	**41.3**	**83.1**	**537.9**

MEASURES

a. In order to assure the full use of existing capacity in this field and promote the development of domestic industry, truck imports will be stopped. Imports will be allowed only if serious needs arise or to prevent monopolistic situations.

b. Passenger cars may, when necessary, be removed from the list of imports without allocation of foreign exchange.

c. Imports of light and inexpensive passenger cars only will be allowed.

d. Care will be taken to ensure that the existing body work industry conform to safety standards. Imports of buses (complete with body) will be discontinued.

Permission to import such buses will only be given to tourism organizations with the provison that they are operated between Turkey and foreign countries.

e. Imports of the quantities of buses and automobiles which can be supplied by domestic manufacture and assembly will be discontinued.

f. Foreign exchange will be allocated to the manufacturing or assembling firms which achieve the domestic ratio to be determined in the program.

g. Imports of necessary spare parts will be permitted until domestic products can replace them.

h. Foreign exchange will be allocated to truck assembling and manufacturing firms in such a manner that they will be able to produce or assemble 2 000 trucks in 1963, 2 500 in 1964, and 3 000 in 1965.

i. A new system of registering goods used as security will be put into effect to facilitate credit sales.

j. Serious consideration will be given to the assembly in Turkey of trucks received as military aid and to the local production of some components.

REPAIR AND MANUFACTURE OF RAILWAY TRANSPORT EQUIPMENT

PRESENT SITUATION

The Turkish State Railroads Administration has sufficient locomotives and wagons to carry the 1967 traffic. Therefore, it will only be necessary to retire from service locomotives which are over 35 years old and replace them with more powerful diesel or electric engines during the plan period.

At present maintenance and repair of the railroad rolling stock is undertaken at the plants and locomotive and car repairshops belonging to the Railroad Administration. There are 46 locomotive maintenance and repair shops, 30 repair workshops for the repair of cars, and 11 inspection shops. Major repairs and rebuilding take place at four plants whose combined repair and production capacity is shown in Table 262.

TABLE 262 — Annual Repair and Production Capacity of the State Railways

Type of Work	Units	Capacity 300 8-hours days
Repairs		
Steam locomotives	Units	600
Passenger cars	"	2 400
Freight cars	"	16 000
Large motor trains	"	244
Production		
Passenger cars	"	50
Freight cars	"	1 000
Steel construction	Tons	3 000
Various tools and major parts	"	80
Grade crossing gates	Units	50
Scales for railway cars	"	50
Rubber goods	Tons	30
Pig iron castings	Tons	15 000
Steel castings	"	350
Brass castings	"	1 200
Sleepers, fish-plates creosoting tools	Units	300 000
Switches	Sets	350
Nuts, bolts, rivets	Tons	1 000
Spare parts for locomotives and cars...........	"	as needed
Timber drying		
Pine timber	M^3	10 000
Hard wood	M^3	6 000

DEMAND PROJECTIONS

a. At present the Railroad Administration's locomotive pool consists of 874 steam, 67 diesel and 3 electric locomotives; 65 motor trains with cars; and 30 electric trains.

By 1967, 307 locomotives will have completed their technical life of 35 years. If all of them are retired from service they should be replaced by 179 powerful modern locomotives.

b. The car pool at the end of 1961 consisted of 15,886 freight and 1,234 passenger cars. Of these, 4,634 freight, 407 suburban, and 33 mainline cars will have completed their technical life by 1967 and must be replaced.

It has been agreed that the new cars and locomotives added to the pool should be of greater capacity than those they replace and that traffic increases up to 1967 will be met in this way.

PRODUCTION PROJECTIONS

a. Repairs

1) Steam locomotives : Since the number of steam locomotives in the pool will decline it will not be necessary to create additional repair facilities for them. However, it will be necessary to expand repair capacity in the East and South-east where these engines will be used. For this purpose, facilities in the Eskişehir shops used only for steam locomotives will be moved to Sivas and installed there. There will be no need for significant investments.

2) Diesel locomotives : At present diesel locomatives and engines are repaired only at the Ankara shops. The capacity of this installation must be 150 locomotives to handle future expansion of the diesel locomotive pool.

3) Electric locomotives : These locomotives should be repaired in the diesel and electric locomotive factory to be set up in Eskişehir; sufficient capacity for this purpose should be established.

4) Freight and passenger cars : Capacity for the repair of such cars is adequate.

b. New Production

1) Manufacture of diesel locomatives : In the first five-year period 83 diesel locomotives will be required; arrangements to finance the importation of the first 33 are almost completed. These locomotives should be of a type suitable to local conditions, and should be purchased in conjunction with the permission to manufacture the rest in Turkey.

Diesel motors were studied in conjunction with marine diesels, and domestic production is planned.

Diesel locomotive parts other than engines can in large measure be manufactured with existing facilities.

A diesel locomotive manifacture and assembly factory making use of existing facilities will be set up at Eskişehir on the premises vacated by the removal of steam engine repairing. Its capacity should be 30 locomotives per year.

2) Manufacture of Electric Locomotives : Electric engines were considered along with diesels because of their similarity; they can be manufactured and assembled in the Eskişehir diesel locomotive works.

The manufacture of both diesel and electric engines depends on the type to be selected and on detailed studies. In pre-project studies made to date it appears feasible to produce all the fabricated steel and sheet components of locomotives with existing facilities. It will be necessary to import other components until they are produced domestically. As the program progresses, production of components which can be manufactured economically in Turkey should be arranged for. There should be cooperation with other industrial organizations.

3) Freight cars : There is capacity in Turkey to produce 1,000 freight cars per year. This is adequate to meet needs until 1967. With certain additional equipment it will be possible to produce domestically a large portion of the couplings and brake parts now being imported.

4) Passenger cars : Present capacity is inadequate to meet the requirement of 250 passenger cars of various types. It is therefore necessary to double the manufacturing capacity of the Adapazarı factory.

VALUE OF PRODUCTION

Table 263 gives the value of railroad rolling stock produced.

TABLE 263 — Value of Railroad Rolling Stock Produced **(Million TL.)**

	1963	1967
Diesel locomotives	—	95.0
Electric locomotives	—	23.0
Freight cars	40.5	60.3
Passenger cars	15.0	35.6
Supplies	27.6	27.6
TOTAL	**83.1**	**241.5**

INVESTMENTS

Table 264 gives investments needed for the manufacture and repair of railroad rolling stock.

TABLE 264 — Investments for the Manufacture of Railroad Rolling Stock
(Million TL.)

	1963	1964	1965	1966	1967
Expansion of Sivas Factory	9.2	5.8	3.5	1.5	—
Expansion of Eskişehir Factory	—	34.7	25.3	—	—
Expansion of Adapazarı Factory	11.0	4.9	—	—	—
Complementary Investments in the factories	7.0	2.0	2.0	2.0	2.0
TOTAL	**27.2**	**47.4**	**30.8**	**3.5**	**2.0**

TABLE 265 — Imports needed for Manufacture of Railroad Rolling Stock

(Million TL.)

	1963	1964	1965	1966	1967
Imports of capital goods	12.9	13.2	9.2	1.2	1.2
Imports of raw and auxiliary materials	24.0	24.0	46.0	59.0	83.0
Demand not met by local production	25.0	24.3	25.0	—	—
TOTAL	**61.9**	**61.5**	**80.2**	**60.2**	**84.2**

VALUE ADDED

Since the railroad rolling stock manufacturing industry belongs to the Railroad Administration, the equipment produced is sold at production cost. Value added, which consists of wages and salaries plus depreciation, is shown in Table 266.

TABLE 266 — Value Added

(Million TL.)

	1963	1967
Value Added by Manufacture	35.5	95.0
Value Added by Repair	55.0	55.0
TOTAL	**90.5**	**150.0**

MEASURES

a. The existing factories will be reorganized administratively and technically.

b. Beginning with assembly, the domestic manufacture, in progressive stages, of diesel and electric locomotives will be expedited. Coordination with existing industry will be provided for.

c. The importation of complete cars should be stopped and possibilities for stopping locomotive imports should be considered.

AIRCRAFT REPAIR INDUSTRY

PRESENT SITUATION

The maintenance and repair of all types of piston airçraft are at present handlend with existing repair shops, but not the maintenance and repair of jet aircraft engines which are replacing the piston aircraft. For this purpose engines are sent abroad. Therefore there is a need for a repair shop in order to save foreign exchange.

DEMAND PROJECTIONS

At present the maintenance of the jet equipment in the hands of the Turkish Airforces and the Turkish State Airlines is of itself sufficient to warrant a jet aircraft and engine maintenance and repair base. Moreover, if this base is established next to an international airport, it can perform repairs on the aircraft of nearby countries which come to the airport and are in need of repairs.

Table 267 shows the minimum demand for such facilities.

TABLE 267 — Annual Demand for Jet Aircraft Repairs (Units)

	Aircraft	Engines	Accessories
Domestic	3.9	153	5 690
Foreign	1.1	55	3 960
TOTAL	**5.0**	**208**	**9 650**

PRODUCTION PROJECTIONS

The establishment of the jet aircraft repair and maintenance base will take three years and will be opened to service in 1966. The total income from this base is shown in Table 268.

TABLE 268 — Income from the Jet Aircraft Repair and Maintenance Base (Million TL.)

	1966	1967
Total income	22.9	35.7

INVESTMENTS

Yearly investments for the maintenance and repair shop are shown in Table 269.

TABLE 269 — Investments (Million TL.)

	1963	1964	1965	Total
Total Investments	25.0	28.1	27.0	80.1

FOREIGN TRADE

The necessary imports are shown in Table 270.

TABLE 270 — Imports (Million TL.)

	1963	1964	1965	1966	1967
Investment goods	13.0	25.0	24.9	—	—
Auxiliary repair material	—	—	—	0.6	1.3
Demand not met by internal production ...	21.4	21.4	21.4	—	—
TOTAL	**34.4**	**46.4**	**46.3**	**0.6**	**1.3**

The value of imports substitution, which will start in 1966, will amount to 21.4 million TL. In addition foreign exchange of 6.8 million TL. will be secured from the repair of foreign aircraft.

VALUE ADDED

Value added is shown in Table 271.

TABLE 271 — Value Added (Million TL.)

	1966	1967
Value Added	18.3	24.5

SMALL SCALE INDUSTRY AND HANDICRAFTS

BASIC PRINCIPLES AND METHODS

There are a considerable number of handicraft workshops and small industries using hand-tools in Turkey.

The place of this sector in the industry as a whole is not clearly known. The detailed classification of these small-scale industries has not been made nor have their means of production been seriously studied. In view of their characteristics, small industries may be classified as follows :

a. Handicrafts

This is a branch of industry which produces consumer goods, ornamental and gift articles. Members of the family and in some cases, apprentices, take part in production which requires a great deal of manual labor but little capital and equipment. The owner himself works in the shop.

Small crafts and handicraft work shops are located in villages as well as in towns and the activity takes place mostly in the house of the owner. Capital and credit facilities are almost inexistent. Production is mostly custom-made. Storage possibilities are limited. Technical knowledge mostly depends on traditional knowledge and apprenticeship.

b. Small Industry

Small industry has a large place in the manufacturing industry and is distinguished from the latter when it falls below certain standards with regard to the size of the workplace, the extent of capital, the number of workers employed, and the number of HP used.

The classification used in statistics for work shops which employ less than 10 workers and use less than 10 HP "motive power" has been followed, here. Though these characteristics do not define small industries precisely, they are useful for determining the place of small industry in manufacturing industry.

Small industries have certain features in common with handicrafts, no matter what classification is used. These features are the following :

(1) The place of work is small and the units established are scattered in location. They are grouped in an industrial region or a marketing center.

(2) The owner bears the whole responsibilty for the unit. He participates in the production with his own labor. He employs one or more foremen and two to three apprentices.

(3) He generally has one or two machine tools in his workship. The primary factor of production is manual labor.

(4) The products are custom manufactured and are mostly those for which import difficulties exist. The kind of product manufactured varies with time. Quality standards cannot be applied to these products and quality control is lacking.

(5) Though these units occupy a significant place in industry with regard to the number of work and workers, the total production for which they account is not high.

(6) The value of production per worker is low in comparison to that of large industry.

(7) Since no establishment or market studies are made, the units are affected by the slightest change in conditions.

(8) As capital is limited, when these units cannot sell their products and must stock them, they are forced to close down.

(9) They have no organization and lack technical knowledge.

PRESENT SITUATION

a. Small Industries

The place of small industries possessing the above characteristics in the manufacturing industry, as determined from various statistical data, is shown in Table 272.

A study of Table 272 gives the following data about the present situation of small industries :

(1) 80 to 99 per cent of the manufacturing industry can be characterized as small industry. In the food, upholstery, furniture and electrical machinery industry, small scale industries tend to increase while large-scale industries tend to decrease.

(2) The number of workers employed, against the total number of workers in the same branch is not as high as the number of work places. For example, though small work places account for 90 per cent of the number of establishments in the food industry, the number of workers they employ is only 59 per cent of total workers in this branch. In the textile industry, the number of workers employed is 47 per cent of the total against 80 per cent of the numbers of work places. In the machinery industry, the number of workers is 38 per cent and that of work places 83 per cent of the total.

Clothing, furniture, upholstery, leather and metal products industries consist at present of small establishments employing on the average two or three workers. In the food, stone and earthware, machinery and electrical machinery sectors, there are about four to eight workers per unit.

(3) Though the number of small units is considerably high in some industrial branches, the value of the production of these units does not occupy a large place in the total. In clothing, furniture, upholstery, leather and metal products, however, small establishments account for 67 to 91 per cent of total production. In many other industries their share in production falls to below 50 per cent; in the food industry, it accounts for 19 per cent and in textiles, 20 per cent, of total production.

(4) In clothing, furniture, upholstery, leather and metal goods, small industries account for 65 to 86 per cent of value added, on the basis of 1959 prices. In machinery and textiles, this percentage varies between 20 and 40 per cent.

(5) When annual production figures per worker are compared between small and large industries in the same sector, ratios are unfavorable to small units and vary between 1/3, 1/2 and 1/1.

As regards the vaule of production, small industries occupy an important place in the consumer and intermediate goods sector. In capital goods, small industries have importance only in the manufacture of metal products. In the other sectors, large scale units are seen to be essential for production.

b. Handicrafts

Household crafts and handicrafts are part of the manufacturing industry together with small-scale industries. Handicrafts are distributed all over the country. Certain characteristic products of a primitive type, and traditional handicrafts are found in certain regions. Regions which are distinguished by certain lines of production are :

Bursa, knives and kilims (hand-woven rugs), Kütahya, tiles, needlework, and simple hand-woven cloth, Gaziantep and Beypazarı, copper ware, Sivas, Trabzon, Beypazarı, silver ware, carpets and kilims, Erzurum, jewelry, objects made with the mineral of the region (oltu taşı) Konya, Adapazarı wood work, Eskişehir, meerschaum products, Kırşehir, alabaster objects and rugs, Maraş, needlework and hand painted kerchiefs, Siirt, kilims etc. Handicrafts which it would be advantageous to develop immediately are those which use the following raw materials : fibre, wood, reeds, earth, stone, minerals, hides and skins.

POLICY TO BE APPLIED IN REGARD TO SMALL INDUSTRY

Small industries, which utilize manual labor rather than capital and machines, are distributed over a large area in Turkey. In view of their effect on employement, small industries will be encouraged to develop as auxiliary and complementary industries, provided the following conditions are realized :

a. If production compares favorably in regard to quality and price with that of large scale industry and with imported goods. In this context, exports of carpets and handicrafts will be promoted in order to develop these traditional crafts.

b. If the handicraft and household goods produced can be sold as souvenir articles to tourists or exported.

c. If these small industries process and enhance the surplus products of large scale industry or utilize finished or semi-finished products, there-by making it possible to use idle capacity in the industrial sector.

d. If production replaces satisfactorily, with regard to both quality and prices, imports of consumer goods.

e. If the village industries to be established near the sources of raw materials process local agricultural products wholly or partly and make it possible to utilize the unused labor force in the agricultural sector.

f. If household crafts and handicrafts are a source of income for the local agricultural population and thus prevent the excessive flow of peasants to cities.

MEASURES

a. In order to promote the planned development of the small industries and handicrafts scattered all over Turkey, a central organization is necessary for providing guidance and assistance in the matter of financing, credit organization, establishment of cooperatives, supply of raw materials and equipment, outlets on internal and external markets, regulations, and quality control. This organization, will be able to undertake various studies in this field, to assume the responsibilities of various ministries in this regard, to implement the small industry and handicraft policy adopted, and to promote the development of the sector in the desired direction.

b. The only institution extending credit to small industries today is the People's (Halk) Bank. This bank is not able to meet the credit needs of small industry; the interest rate on the credit granted through the intermediary of the Small Industry Security Cooperatives is as high as 22 per cent. The credit fund of the Halk Bank will be increased and the interest rate lowered by means of measures designed to reduce the cost of credit. Credits will be given for expanding units, purchasing machinery and raw materials, and for building stocks of finished products.

c. Efforts will be made to gather small industries which are now scattered and work separately, in the industrial districts shown in town planning.

d. Credits and other aids to small industries will be given with a view to encouraging the setting up of cooperatives.

e. The conditions for setting up work shops and practising a craft as an artisan will be clearly defined.

f. Setting up the above mentioned organization will ensure that small industries and handicrafts are no longer exploited by intermediaries.

g. New regulations for apprenticeship will be enforced.

h. Handicrafts will be taught in technical schools, and courses in the appropriate handicrafts of the region will be provided in villages.

Various other relevant courses (courses for apprentices and masters, itinerant village courses, accelerated, short-term and on-the job training courses) will be arranged.

i. In order to publicize the products of handicrafts and small industries on internal and external markets, these industries will participate in domestic and foreign fairs and prepare catalogues of their goods.

j. Registration and customs formalities will be facilitated for exportable handicrafts and souvenir articles.

k. In order to eliminate unfair competition from unscrupulous workshops, quality control will be applied, and standards will be determined and published for each product; the non-observance of these standards will be penalized.

l. Small industries will be distingushed from the sellers of these products and care will be taken to support producing units only.

m. The public sector and large-scale industry will be encouraged to place orders with small industry through the intermediary of the central organization to be set up.

n. Measures will be taken to encourage weaving, stone masonry, carpet-making and tile masonry handicrafts with regional characteristics.

TABLE 272 — Place of Small Industry in *Manufacturing*

Sector	Years	Percentage of production units	Percentage of labor force employed	Percentage of value of production	Percentage of value added	Production value per workers (TL.) In establishments employing less than 10 workers or with less than 10 HP	Production value per workers (TL.) In establishments employing more than 10 workers or with more than 10 HP
Food	1950	71	32	17	—	13 350	30 000
	1956	82	54	29	—	14 800	43 000
	1959	93	59	32	41	18 940	60 000
Clothing	1950	99	86	81	—	6 050	9 700
	1956	99	94	90	—	10 300	17 000
	1959	99	96	99	86	8 800	20 000
Furniture	1950	97	84	87	—	7 550	5 800
	1956	98	93	99	—	10 600	15 000
	1959	99	92	78	79	6 600	23 000
Leather Products	1950	97	85	81	—	13 900	18 000
	1956	85	91	82	—	19 000	40 000
	1959	97	77	51	64	10 550	54 000
Stone, Earth and Glassware	1950	92	42	35	—	4 750	6 350
	1956	89	66	39	—	3 900	1 200
	1959	91.5	64	24	26	3 250	10 500
Metal Products	1950	98	54	76	—	5 700	7 500
	1956	98.5	71	72	—	14 000	14 000
	1959	98.5	73	67	65	15 000	20 000
Machinery	1950	89.5	50	50	—	7 000	7 000
	1956	90	61	53	—	11 500	16 000
	1959	83	43	38	21	15 000	18 000
Electrical machinery	1950	89	90	40	—	500	6 000
	1956	94	67	34	—	7 700	29 000
	1959	94	69	54	54	25 000	33 600
Transport vehicles	1950	93.5	41	30	—	2 500	3 900
	1956	94.5	56	43	—	5 000	8 700
	1959	83	66	58	50	7 200	10 300
Textile	1959	80	47	26	25	11 000	27 500

Note: Value figures taken from available data, are liable to show a margin of error of 10 to 15 %.

CONSTRUCTION

BASIC PRINCIPLES AND METHODS

This sector embraces all the activities pertaining to the construction part of investments. These include the mental work-design and project-connected with constructing as well as the implementation of the project with building materials and the actual construction and completion of the work. Construction in the public sector can be distinguished from construction in the private sector. The private sector is most active in residential, commercial and industrial construction, while in the public sector construction is performed as a public service and covers all the fields of activity in this industry. Construction activities in the public sector include the preparation of studies and projects and the financing and execution of the work to be constructed. At the execution stage, however direct contacts with private enterprise are made. The official agency concerned calls for tenders from construction firms and, after it has awarded the contract to one of them, it supervises the construction according to project requirements and specifications. It may be noted that in recent years certain public agencies have been organized so as to carry out their own construction work. When the government agency undertakes the whole construction itself by using its own machinery and equipment, the force accounts system (emanet) is used. In situations under this system where large amounts of machinery and equipment are required on short notice, specific jobs are given to private firms. This has the effect of assuring the development of private construction firms as well as influencing, thorugh price negotiations, market conditions in the desired direction.

Construction falls into seven groups :

a. Social construction

(1) Dwellings

(2) Health facilities

(3) Hotels and office buildings

(4) Educational buildings

(5) Administrative and service buildings

(6) Customs houses

(7) Prisons

b. Irrigation and water works

c. Construction associated with agriculture

d. Construction associated with energy

e. Industrial construction

f. Construction for transport

g. Protection of historical buildings and construction for art purposes.

The situation in this sector is rather confused as almost every administration and official agency has a construction department for carrying out the construction work determined in other sectors. As a result, varying standards and costs are realized in the different organizations working in the same construction group.

The aims pursued in the construction sector are the following; to achieve uniformity in standards and costs; to determine limitative levels with regard to the material, technical personnel, work periods and labor which will be required for the construction involved in the investments of the plan period; and to define measures which will ensure that these limits are maintained and that the largest volume of construction per unit of currency spent on investments is realized. In this connection, the amount of construction realized each year in the 1950-60 period by the thirty-three responsible official agencies was determined in terms of so many thousand square meters in social construction, thousand hectares in irrigation, kilometers of roads etc. and converted into million TL. In these estimates, the amounts paid to contractors of the expenditures made on construction under the force account system were taken into consideration; no account was taken of items not directly entering into construction costs, such as personnel salaries, travel expenses, rents and depreciation, fuel and services, maintenance expenses, machinery and equipment costs, design and project expenses and expropriation costs. The inventories of these investments, which consist exclusively of building investments, (exclusive of machinery and equipment) refer to those of the public sector. Private sector construction, which consists mainly in residental, commercial or industrial buildings, could not be included in this inventory. but it was possible to infer its extent.

PRESENT SITUATION

The percenetage distribution of State investments according to construction groups in recent years is shown in Table 273.

In order to calculate the cost of basic building materials in State construction, an attempt was made to determine models for the average construction work of each agency and the characteristic materials used per unit of measurement of these models. By multiplying the physical invertory of investments in construction by these characteristcs, expenditure on building materials was found.

According to these findings, 45 Kg. cement, 48 kg. iron, 45 brick units, 11.8 decimeter^3 timber, 1 decimeter^2 window-glass were used per 100 TL. (at 1960 prices) of building investment (exclusive of machinery and equipment).

Although there is no information for the private sector, it was considered that use could be made of the ratio of private to public sector cement consumption in cement consumption statistics.

As it is possible in construction technology to infer other building material expenditure items from cement consumption, demand levels for construction materials in the private sector were estimated on the basis of these assumptions. Only, iron beams which are not used as basic materials in the private sector, were excluded from the above assumptions, and were calculated separately.

TABLE 273 — Percentage Distribution of State Construction Investments

Years	Construction related to social services	Construction related to agriculture and irrigation	Construction related to energy	Industrial construction	Construction related to transport
1950	13.5	10.3	8.5	25.0	43.0
1951	15.0	17.9	6.9	6.4	53.5
1952	10.1	19.0	12.5	7.8	49.0
1953	11.6	21.3	9.5	9.0	48.0
1954	13.2	19.8	17.8	11.8	43.5
1955	11.5	9.1	18.5	12.8	47.5
1956	6.95	8.5	31.5	12.3	41.5
1957	8.7	11.1	26.8	6.7	47.0
1958	13.7	18.0	18.5	9.8	38.8
1959	12.4	11.9	16.8	4.8	54.0
1960	13.6	15.0	14.0	11.0	47.8

In the public agencies and establishments carrying out construction work, there are 3.65 executive working personnel to each million TL. of construction investment (machinery and equipment excluded). 0.63 of these are civil engineers and architects, 0.11 are mechanical and electrical engineers, 0.6 are technicians and draftsmen, 0.52 are supervisors and foremen, 1.76 are administrative and non-technical personnel and 0.03 are other engineers. According to this, for each million TL. of construction investment, the following personnel is involded :

Engineers	0.75
Technical personnel	1.14
Non-technical administrative personnel	1.76
	3.65

For each TL. invested in building (exclusive of machinery and equipment) 0.26 TL. is for building materials, 0.53 TL. for labor, 0.07 TL. for fuel and 0.14 TL. for technical services, other expenses and profit. Fluctuations in the level of investments put a strain on standards and technological criteria in the construction sector. When investments are above capacity, groups which do not belong to the profession and have no technical qualifications go into the business. Because of the shortage of technical personnel, wages increase and technical responsibility diminishes. The movement of personnel to better paid jobs creates differences with respect to cost, quality and date of completion between institutions which can or cannot conform to the new situation. When investments are below capacity, wages fall and as result of idle capacity, interest and maintenance expenditures, and depreciation charges increase. Further as the system of competition is irrational, it leads to excessive reductions and this in turn opens up opportunities for entrepreneurs outside the trade and results in differences as to costs, quality and time required to complete construction. A better balance is needed in the construction sector between capacity and the volume of investment.

There is a shortage of secondary technical personnel in the construction sector. In order to overcome this shortage, graduate engineers and engineering personnel work as technicians foremen. This causes a serious waste of manpower, hinders technical development and makes the establishment of rational and economical construction techniques very difficult. Today there exists a competition for technical titles rather than a tendency towards technical development. As a result of this, requirements for technical personnel at lower level continue to increase. In the State sector, technical services are generally rewarded only by salaries which do not offer any extra remuneration for productive work, efficiency and initiative. Advancement for technical personnel, unless through transfer to an administrative post, does not exist today. The system of advancement based on vacancies in posts conflicts with technical development.

As the official agencies and institutions established for the purpose of doing or commissioning construction work have their own technical services, their personnel and general expenses increase. The share of general expenses (personnel, rent, interest and fuel) between the years 1950-1960 is shown below.

1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
0.47	0.40	0.32	0.25	0.18	0.14	0.15	0.22	0.30	0.32	0.35

General expenses of more than 15 per cent cause a fall in the productivity of construction.

The fact that different technical specifications and criteria are applied in constructions of the same type prevents standardization and lowers productivity.

The fact that adjudications are made in accordance with Law No. 2490 on adjudications also results in a rise in costs, a fall in quality and a lengthening of the construction period. The relevant article of the law is taken to mean that the lowest bidder should be given the contract.In actual fact, low bids which seem to be more advantageous are in reality the most expensive when they entail construction delays and give rise to litigations. Excessive reductions in bids result in replacing serious firms by non-serious ones which very often hope to secure gains by legally contending any possible errors in the estimate of costs.

Frequent litigations in construction and the fact that, thought the work is finished, conflicts arise which hold up its being put into operation restrict to a considerable degree the volume of investment in this sector. This situation is due to the fact that the degree of responsibility of the administration on one hand and of the firms on the other, is not clearly stated, in a way which is fair to both parties, in the agreements and specifications.

The mechanism of awarding contracts and determing prices in construction for the public sector is based on price analysis lists. As materials and methods which ensure economies and increase speed are entered with delay and difficulty in these lists (so much so, in fact, that these lists have not been modified to take into account the technological development of the past ten years), the system of slow and expensive construction still prevails. New construction materials and methods must be included, after the adequate market tests have been made, in agreements and price analyses.

DEMAND PROJECTIONS

Table 274 gives demand projections for the basic construction materials needed for the investments which will be made in the plan period to realize a 7 per cent rate of growth.

TABLE 274 — Demand Projections for Basic Construction Materials

Materials	Unit	1963	1964	1965	1966	1967
Cement	Thousand tons ...	2 425.0	2 769.0	3 036.0	3 334.0	3 593.0
Timber	Thousand M^3	646.0	735.0	810.0	885.0	945.0
Brick	Million units	250.0	282.0	317.0	338.0	355.0
Iron for use in construction	Thousand tons ...	295.0	340.0	375.0	420.0	455.0
Excavation	Million M^3	61.5	69.5	76.5	84.5	88.5

INVESTMENTS

Investments in the construction sector which will be made, on the basis of the above projections, in the five-year plan period are shown against total investments in Table 275.

TABLE 275 — Investments in Construction

(Million TL.)

Years	Total Investments	Construction Investments (*)
1962	8 526.0	5 403
1963	9 504.7	6 063
1964	10 812.6	6 947
1965	11 958.6	7 669
1966	13 119.2	8 313
1967	14 240.8	8 983

(*) General expenses included, machinery and equipment excluded.

If the present organization of the construction sector is not improved and conditions remain unchanged, the capacity of the sector will not suffice for the realization of these investments. But since the construction sector should be in a position to ensure the realization in the plan period of the investment levels shown in Table 275, the necessary measures to raise its capacity must be taken rapidly.

Since raw material and capital resources will be expanded as indicated in Tables 274 and 275, there will be surplus stocks unless the amounts shown in Table 274 are fully used. Capacity in excavating machinery and equipment is sufficient for the excavation shown in Table 274. In order to realize the volume of investment foreseen in the plan and to prevent stock accumulation in basic construction materials, the measures shown below will have to be taken.

MEASURES

a. General administrative expenses in State construction will be reduced.

b. Cost accounting will be introduced.

c. Administrative personnel will be reduced to a minimum. The ratio of 1.75 administrative personnel and 0.75 technical personnel to every million TL. of investment will be reversed.

d. The following measures will be taken to raise the productivity of technical services :

(1) Technical staff relationships ought to be according to the normal pyramid pattern. The initial aims and standards of schools set up to train technicians of a certain level should not be modified. Vocational progress should be left to the later stages of training and any legislation which impedes this should be amended.

(2) As technical development possibilities are limited, the wages of the technical personnel tend to increase unduly; on the other hand, present regulations do not make it possible for technical personnel to get advancement unless in the case of transfer to an administrative post. This system will be changed and a system instituting technical titles will be adopted.

(3) It is not necessary that all technical services should be included in the set-up of administrations and official agencies. Therefore the establishment of a continually increasing, and productivity-lowering staff to meet theoretical and schematic requirements will be avoided, while the setting-up of private technical and consulting offices will be encouraged.

e. Standard agreements, general and technical specifications etc. will be determined in accordance with modern building concepts and techniques in order to ensure that quality construction is erected by the most rational and speedy methods and to protect the reciprocal rights of the administration and those whose who carry out works for them. These standards will be used by all official agencies and organizations. In this connection, common provisions applying to all constructional agencies will be included in building regulations, and protective maintenance and repair regulations which will be applied by all official agencies and organizations will be prepared.

f. Law No. 2490 on Adjudications will be modified as soon as possible to safeguard the interest of the Treasury and to ensure that services are performed in the best and quickest way.

g. Adjudications will be made, even if they are based on the force account system, after implementation projects are prepared and the types of the main materials to be used in construction are determined.

h. If a construction work is not completed in time, proves to be expensive or gives rise to disensions, the case will be examined to see whether the administration is in the right or not; on the other hand records of firms will be kept and firms which seek to make gains by means of legal disputes will not be given contracts.

In this connection a Chamber of Building Contractors will be set up.

i. The losses incurred by the construction firms of State Economic Enterprises, as a result of operating at prices below those of the market, will not be covered from the funds of those enterprises.

j. State buildings for social and public services will be erected according to a uniform model to be determined by regions in accordance with local characteristics. The projects for these buildings will be prepared by one and the same department.

k. Appropriate insurances schemes will be prepared for the construction sector.

POWER

GENERAL SITUATION

BASIC PRINCIPLES AND METHODS

a. Consumption of non-commercial fuels (wood, animal manure and agricultural residues) in Turkey is above normal. The long-standing aim has been to end the resulting economic waste, and to provide people with fuel which is cheap and not detrimental to health.

The development of the conventional sources of power only has been considered in the plan.

The basic principle is to lower to minimum power production costs by making the best use of power resources in Turkey.

b. Demand for the various types of fuel was computed in two ways :

(1) Past trends in demand for each type of fuel and estimated future demand for primary power resources were considered.

(2) Proceeding from primary power resources, total power consumption in recent years was calculated and future global demand was estimated according to past consumption trends. This was checked with the demand figures for primary power resources found in paragraph (1).

Preliminary measures were taken and the necessary revisions made to provide for the best utilization of primary power resources.

PRESENT SITUATION

Today seven types of fuel are used in Turkey. Four of these (coal, lignite, petroleum products and hydro-electric power) are commercial, and three non-commercial fuels (wood, cattle dung and agricultural residues). Statistical information exists on primary power resources. A survey made in 1961 gives information for non-commercial fuels.

TABLE 276 — Primary Power Resources

Primary Power Resources	Capacity (Reserve) (1 Million Ton-1 Billion Kwh)	1961 Consumption Quantity (1 Million Ton-1 Billion Kwh)	1961 Consumption Hard Coal Equivalent (Thousand Tons)	Percentage of Total
Hard Coal	1.5	4	4 000	20.0
Lignite	0.847	3	1 620	8.2
Petroleum products				
Kerosene	(*)	1.65	2 508	12.6
Fuel-oil	(**)	0.25	410	2.1
Hydro-electric power (annual)	53.0	1.3	650	3.3
Wood		13.1	5 764	29.0
Animal manure and form residues (annual)	17.5	14.0	4 900	24.8
TOTAL			**19 852**	**100**

(*) Rafinery capacity in Turkey is of 4.7 million tons crude petroleum.

(**) As liquid petroleum gas has only been recently introduced in Turkey, 1961 consumption is very small. Even if LPG is used fully in future, its place in the power balance will still be too small to be mentioned.

As shown in Table 276, 54 per cent of the power consumed in Turkey is supplied by non-commercial sources. This is a serious loss to the economy and leads to the burning of wood and animal manure which could otherwise be used more advantageously. As a result of this, wood and animal manure needs for non-fuel purposes have to be met by straining resources unduly or by imports.

Power consumption showed an average increase of 4.3 per cent between 1950 and 1960.

TABLE 277 — Power Consumption (in coal equivalent)

Years	Total Consumption Million Tons	Total Consumption Average rate of increase %	Per capita power Consumption Kg.	Household power Consumption (Million Tons)	Average rate of increase %
1950	12.664	—	605	8.9	—
1955	15.558	4.2	647	10.6	2.5
1960	19.296	4.4	694	12.6	2.5
1961	19.852	2.9	694	12.8	1.5

DEMAND

With a 5.4 per cent increase in national income in the 1950-1960 period, the income elasticity of demand for power is seen to be 0.8. The demand forecasts shown in Table 278 were established on the assumption that elasticity would remain unchanged.

TABLE 278 — Power Demand **(Coal Equivalent — Million Tons)**

	1963	1967	1977
Demand for household use	13.6	15.4	20.6
Total demand	**21.7**	**27.0**	**46.0**

Fuel demand for domestic use was estimated to increase at a slightly faster rate than in the past. It was estimated that industrial power consumption would increase by 9.4 per cent. The average increase in the last ten years was 5 per cent.

According to this rate of increase, per capita power utilization will be as shown in Table 279.

TABLE 279 — Per capita power consumption **(Coal Equivalent - Kg.)**

Years	Per capita consumption
1963	715
1967	800
1977	1050

PRODUCTION TARGETS

The aim is to meet demand by exploiting commercial power resources in the most efficient way.

Burning of dung and forest products should be prevented. However, it is very difficult to change in a short time established practices springing from economic needs. It is therefore assumed that, as a result of the measures taken, wood and dung consumption will remain the same in the plan period and show a relative decrease with the development of other power resources. A quantitative and not only relative decrease in consumption is expected to set in after 1967.

Except for petroleum, all power requirements are met wholly from internal sources. Though petroleum exploration holds out promise, internal production covers only 20 per cent of requirements at present. The balance will be met by crude oil imports.

TABLE 280 — Percentage Utilization of Primary Power Resources

	1963	1967	1977
Hard Coal	19.2	17.4	15.0
Lignite	9.5	11.6	20.0
Petroleum Products	12.9	14.8	20.5
Fuel - oil	3.5	11.1	21.0
Hydro-electric power	4.1	4.2	8.5
Wood	28.3	22.3	10.0
Dung	22.5	18.6	5.0
TOTAL	**100.0**	**100.0**	**100.0**

POWER POLICY

a. In conformity with the basic principles outlined above, commercial fuels will be marketed at prices reflecting the production costs of fuel from economically exploited primary power resources as well as the state of reserves in these resources. This will assure that the utilization of power resources is consistent with economic realities.

b. Prices of different types of energy will be regulated according to their cost and potential reserves. Moreover, these prices will be such as to induce the use of of energy in technically apropriate sectors and the introduction of advanced exploitation techniques.

c. Economy in consumption will be secured by ensuring that consumers use the most efficient equipment.

MEASURES

a. Budgetary measures will be taken, if necessary, to ensure that bakeries, Turkish baths, limepits, and tile and brick kilns burn other fuels than wood and dung, and that all official establishments, including military establishments use only commercial fuels.

b. An extensive program for the education and information of those concerned will be applied.

c. A comprehensive assesment of the capacity and quality of all lignite beds in the country and of the investments required to work them will be made as soon as possible.

d. A study will be made of all the heating and baking equipment used and manufactured in various parts of the country.

(1) Inexpensive types of equipment which could be manufactured by the farmers themselves and would provide 50 per cent economy in fuel as compared with current equipment will be developed.

(2) Stove manufacturing firms will be encouraged to manufacture economical lignite-burning stoves, the designs of which they will elaborate in cooperation.

e. Measures will be taken to install the above type stoves in as many rural and urban houses as possible during the five-year period.

f. In coal or lignite burning stoves, the use of peat or agricultural residues for kindling purposes will be encouraged. The kindling material to be obtained by mixing these with tar and cheap chemical products will largely replace the wood used at present for this purpose.

g. Legal measures will be taken to reduce and if possible eliminate the smoke, dust, soot etc. which is due to faulty burning of coal, lignite and fuel-oil for central heating in cities and towns and is detrimental to health.

(1) Hard coal-lignite coke will be used in cities.

(2) The most suitable types of fuel will be used in central heating boilers.

h. The setting-up of biogas installation near State farms in agricultural centers will be experimented.

COKE AND GAS

BASIC PRINCIPLES AND METHODS

a. The aim is to provide economic and suitable types of fuel, particularly in cities.

b. Demand projections were based on past trends and revised in the light of the targets to be attained.

PRESENT SITUATION

Coke is produced form hard coal and distributed by the Coal Sales and Distribution Agency (Türkiye Kömür Satış Tevzi Müessesesi).

Coke is produced by the Iron-Steel Industry and gas factories. In addition to the coke used by iron and steel industries, 450,000 tons of coke are used in other industrial sectors and in households.

Gas plants exist in İstanbul, İzmir and Ankara.

Measures should be taken to prevent air pollution in cities from the lignite burned for domestic heating purposes.

TABLE 281 — Coke and Gas Production and Capacity, 1960

	Production	Capacity
Coke	740 000 tons	762 500 tons
Gas	97 million m^3	113.5 million m^3

DEMAND FORECASTS

Demand for secondary types of fuel is shown in Table 282.

TABLE 282 — Demand Forecasts for Secondary Types of Fuel

	Unit	1962	1963	1967
Coke				
Household requirements	(Thousand Tons)	450	475	860
Metallurgy "	(" ")	350	500	1 000
Gas	(Million m^3)	108	130	242
LPG	(Thousand Tons)	10	11	16

PRODUCTION TARGETS

Demand will be met by the factories to be constructed. The coke requirements of metallurgy are supplied by coke factories installed together with iron-steel works. The income from metallurgical coke which is produced and consumed by the same establishment has not been calculated.

TABLE 283 — Estimated Income from Production

(Million TL.)

	1962	1963	1967	1967 Index (1962=100)
Income from production	70.0	87.1	141.7	202

Gas factories will be required to use up to 40 per cent lignite.

INVESTMENTS

In order to meet demand, new coke and gas factories will be established in certain cities and existing factories will be expanded in the five-year period.

Investments of 150 million TL. will be required for this purpose. A further 29 million TL. will be set aside for the production and distrubution of liquid petroleum gas.

EFFECT ON FOREIGN TRADE

Import requirements, amounting to 35.3 million TL., concern investment goods only.

TABLE 284 — Investments

(Million TL.)

	1963	1964	1965	1966	1967
Total	30	30	44.8	43.5	30
In foreign currency	4.5	4.5	17.3	4.5	4.5

VALUE ADDED

Value added in this sector is shown in Table 285.

TABLE 285 — Value Added

(Million TL.)

	1963	1964	1965	1966	1967
Value Added	38.5	41.0	47.6	54.7	63.5

ELECTRIC POWER

BASIC PRINCIPLES AND METHODS

a. Turkey has a vast hydro-electric potential. The potential which can be used is estimated at 53 billion kwh per annum. At present only a small part of this is utilized. Basic principles in this sector are :

(1) to make better use of the vast hydraulic resources which are wasted today;

(2) to make better use of electric power;

(3) to operate electric utilities more economically.

b. Demand forecasts are based on past trends and take into account estimated developments in the economy.

PRESENT SITUATION

Today only 30.5 per cent of the population benefit from electricity. Electric power is supplied to 67 provincial centers, 420 district and subdistrict centers and 182 villages. There are two large interconnected grids and several regional systems. Outside of these, electricity is supplied by individual diesel power plants.

TABLE 286 — Electric Power, 1961

	Production		Installed Capacity	
	Power MW	Energy Million Kwh	Power MW	Energy Million Kwh
North-Wesh Anatolia System	378	1 888	508	2 840
West Anatolia System	71	321	200	715
Çukurova System	35	160	51	237
Total of Turkey	684	3 050	1 260	4 900

This production is realized by utilizing different types of primary energy resources.

TABLE 287 — Breakdown of Electricity Generation by Primary Energy Sources (Million Kwh)

	Production	Capacity
Hydraulic		
Stroge	1 073	1 374
Run off	203	388
Thermal		
Coal	1 486	2 700
Petroleum Products	245	420
Others	43	12
TOTAL	**3 050**	**4 894**

Electric power is transmitted and distributed by 2,000 kms of high, 3,312 kms of medium, and 10,850 kms of low tension lines.

Excluding self-generating units, electric power plants belong to and are operated almost wholly by the State. Only a small fraction is privately owned.

DEMAND FORECASTS

There has been an annual increase of 11.6 per cent in energy production over the last ten years. In future years, annual increase is expected to rise to 13 per cent.

TABLE 288 — Estimated Demand for electric power (Energy in Million Kwh — Power in MW)

	North-West System		West System		Çukurova System		Antalya System		Others		TOTAL	
	Power	Energy	Power	Energy	Power	Energy	Power	Energy	Power	Energy	Power	Energy
1962	445	2 360	76	353	40	182	22	109	178	546	766	3 550
1963	510	2 663	90	423	45	207	23	157	187	561	855	4 011
1967	800	4 200	157	768	100	456	32	192	292	923	1381	6 539

The main cause of the more rapid increases of systems is that the areas served by systems expand from year to year.

PRODUCTION TARGETS

The reqiurements shown in Table 288 will be met in a steady manner and as inexpensively as possible.

TABLE 289 — Revenue from Production (Million TL.)

Years	Revenue from production
1962	568.0
1963	642.0
1967	1 046.0

INVESTMENTS

4956 million TL. will be invested in new power stations, new transmission and distribution lines and networks, and for maintenance and repair. These investments are shown in Table 290.

TABLE 290 — Investments in the Electricity Sector (Million TL.)

	1963-67 Total		1963		1964		1965		1966		1967	
	Foreign Currency	Total	F.C.	Total	F.C.	Total	F.C.	Total	F.C.	Total	F.C.	Total
Research	—	75.0	—	12.0	—	13.0	—	14.0	—	16.0	—	20.0
Maintenance	29.5	94.0	4.5	15.0	5.0	16.0	5.5	18.0	6.5	20.0	8.0	25.0
Unfinished Power plants	57.2	135.0	30.0	77.1	27.2	57.9	—	—	—	—	—	—
Unfinished Lines	122.5	299.5	69.2	165.6	30.3	74.3	12.3	33.0	10.7	26.6	—	—
Unfinished Networks	21.9	136.8	18.1	101.9	3.8	34.9	—	—	—	—	—	—
New Power Plants	1060.3	2423.6	136.1	233.6	219.7	453.0	268.0	604.5	186.5	534.5	250.0	598.0
New Lines	562.2	1211.8	16.2	36.2	38.8	90.9	93.1	213.6	210.9	442.9	203.2	428.2
New Networks	51.4	580.0	3.0	35.0	7.3	80.0	11.5	130.0	13.3	150.0	16.3	185.0
TOTAL	**1905.0**	**4955.7**	**277.1**	**676.4**	**332.1**	**820.0**	**390.4**	**1013.1**	**427.9**	**1190.0**	**477.5**	**1256.2**

The new works to be undertaken in the five-year period are :

a. Construction of 1900 MW capacity hydraulic and thermal power plants, including the 980 MW Keban Hydroelectric station on the Euphrates with an annual production capacity of 4.5 billion Kwh.

b. Addition of 9000 km lines to the high tension transmission network.

c. Connection of 530 cities and towns to interconnected and regional systems.

d. Electrification of a great number of towns and villages.

EFFECT ON FOREIGN TRADE

Import requirements consist only of investment goods. The value of these is shown in Table 290.

TABLE 291 — Value Added (Million TL.)

	1962	1963	1967
Value Added	394.0	452.0	740.0

MEASURES

a. The operation of electric works will be unified. The Turkish Power Corporation will be established and all present facilities will be transferred to this corporation.

b. Designs and projects will be accelerated and standardized.

c. Electricity taxes will be simplified.

d. Power plants located in system areas and not utilized presently will be transferred to the Turkish Power Corporation. Those that are adequate will be operated and those that cannot be operated in the system will be removed to new electrification sites.

e. Before connecting new sites to a system, an arrangement will be concluded with these sites to ensure that the power stations formerly used by them can be transferred tc other places.

f. Electrical equipment used in power plants will be standardized so that the spare pool can be reduced.

TRANSPORTATION AND COMMUNICATION

GENERAL SITUATION

BASIC PRINCIPLES

a. To satisfy the increasing requirements for passenger, goods and communication traffic, while taking into consideration economic factors in the selection of systems transportation and communication.

b. To avoid creating excess capacity and to make full use of available capacity.

c. To improve services and lower costs.

d. To run transport and communication services in the way most suited to national conditions.

At present, there is excess capacity in transportation and lack of capacity in communications. The main highway network is developed to the extent of almost satisfying potential needs, whereas the village roads supporting this network, which are of a more social nature, are far from being satisfactory. The physical standards of the highways do not confirm to conditions in the country. Railroad construction is still based on old techniques. Improvements of rail tracks are not carried out. From now on, railroads will be constructed according to techniques and standards which confirm to existing conditions.

Due to the fact that pricing policy fails to comply with the requirements of the national economy, there is great competition between the various transport systems. A more suitable pricing policy, which will enable people to choose whatever means of transport they prefer, and will at the same time be in the best interest of the economy, will be adopted.

The specific details of the transportation policy, outlined in its basic principles in the plan, will be worked out during the plan period on the basis of inventory studies, traffic maps and cost accounting.

As regards communication, there is no problem in postal services as the system is elastic. The telegraph network is sufficient, but the telephone network is far from meeting requirements in all respects. Telephone networks will be improved to meet requirements. Radio stations will be developed so as to insure good reception in all regions of the country. The subject of television will be considered according to changes in technology and costs, and provided the establishment of television is not a strain for the economy.

VALUE ADDED

The value added that will originate in transportation and communication is shown in Table 292.

TABLE 292 — Value Added in Transportation and Communication

(Million TL.)

	1962	1963	1967	1967 Index (1962=100)
Transportation	1 650.0	1 900.7	2 659.4	161.1
Ports and harbors	47.3	48.4	54.3	114.7
Communication	350.0	369.0	659.0	188.3
TOTAL	**2 047.3**	**2 318.1**	**3 372.7**	**164.7**

INVESTMENTS

Investments in the transportation and communication sector are shown in Table 293.

TABLE 293 — Investments in Transportation and Communication

(Million TL.)

	1963	1964	1965	1966	1967	Total
Roads	707.0	702.0	793.6	902.5	1 092.7	4 198.0
Vehicles	158.2	347.8	420.7	686.7	850.1	2 463.5
Total Transportation	**856.2**	**1 050.0**	**1 214.3**	**1 589.2**	**1 942.8**	**6 661.5**
Ports and harbours	150.6	60.3	38.3	16.8	28.3	294.3
Airports	27.7	22.3	22.3	22.2	22.2	116.7
Communication	237.5	211.8	202.2	190.0	165.4	1 006.9
Radio	17.0	11.5	5.2	33.7	12.6	80.0
TOTAL	**1 298.0**	**1 355.9**	**1 482.3**	**1 851.9**	**2 171.0**	**8 159.4**

TRANSPORTATION

BASIC PRINCIPLES, METHODS AND OBJECTIVES

a. Basic Principles

(1) To set up a central authority for implementing the transport policy which is conducted at present in an un-coordinated way.

(2) To apply the following economic principles in organizing transportation :

(a) Rail and sea transport should be used for long distance transport.

(b) A short distance transportation system should be developed to feed and supplement land, rail and sea transport.

(3) All transportation systems should be subject to the same conditions and obligations.

b. Methods

(1) The development of transportation in the plan period was estimated on the basis of trends in the last ten years, and of the changes expected in the economy. According to this, passenger transport will increase yearly by 7.7 per cent and transport of goods by 8.8 per cent.

(2) The distribution of this increase among the various means of transportation takes into account the necessity of ensuring an economic optimum, and the trends in the different systems.

(3) Transportation, which developed in a haphazard and disorganized manner in the past, will be organized according to the principles of transportation economics. The share of each transportation system in total transport was estimated on the assumption of equal load distribution between the different systems. The economic advantages and capacities of each system were also considered.

c. Objectives

(1) To meet on a steady and regular basis the freight transport requirements arising from the development of the economy, and to ensure a higher degree of security, comfort and economy in passenger transportation.

(2) To put a stop to excessive competition between different systems which is harmful to these systems, and to use transport equipment in the manner most beneficial for the economy.

(3) To adhere to geometric standards which are not in excess of needs, to try to complete the network of State highways and to put emphasis on provincial and village roads.

(4) To define the conditions in which railroads can function most economically, and to use rail transport only on the profitable routes.

(5) To carry at least half of Turkey's foreign trade with newer vessels and to build up a merchant navy that can compete with foreign ships on international routes.

(6) To reinforce the security equipment of airports and to establish efficient air transport between Turkey and neighbor countries.

PRESENT SITUATION

The State and the private sector work together in transportation. Land transport is in the hands of small private enterprises, railways and airways are all State enterprises and maritime transport is handled by both the State and private enterprise.

a. Great changes have taken place in transportation services in the last ten years. The greatest increase has been in land transport. Whereas in 1950 the sware of land transport in the total was 46 per cent for passenger, and 17 per cent for freight transport, these shares rose to 67 and 37 per cent respectively in 1960. At present, land transport has exceeded economic limits.

TABLE 294 — Traffic Situation

System of Transport	Passenger Traffic Million Passenger - Km.	Goods Traffic Million Ton - Km.
Land	11 727	3 927
Rail	3 810	3 710
Sea		
— Domestic Routes	465 (*)	1 600
— Foreign Routes (**)		13 200
Airways	152	15
TOTAL	16 154	22 452

(*) Includes passenger transport in foreign routes.
(**) Covers the transport of goods entering into Turkey's foreign trade.

b. Fixed assets today :

Total highways	km.		48 172
State highways	"	23 969 (*)	
Town & Village Roads	"	24 203	
Total Railroads	"		9 301
Lenght of lines	"	7 881	
Double and Secondary Lines	"	1 420	

c. In the transport sector, capacity was calculated as far as possible with respect to both vehicles and roads.

(1) Road capacity		
Highways	(a)	70 642 606 000 Passenger-Km.
	(b)	33 096 260 000 Ton-Km.
Railways		73 000 000 000 Crude Ton-Km.
(2) Vehicle capacity		
Land transport	(a)	14 662 860 000 Passenger-Km.
	(b)	9 337 200 000 Ton-Km.
Railway transport		13 860 000 000 Unit-Km.
Sea transport	(a)	2 418 293 280 Passenger-Km.
	(b)	9 131 000 000 Ton-Km. (Cabotage)
	(c)	40 410 709 240 Ton-Km. (External)
Air transport	(a)	721 751 000 Passenger-Km.
	(b)	2 137 000 Ton-Km.

DEMAND

a. Estimates for total transport demand were prepared according to the increases assumed above. In estimating the demand for various means of transport, account was taken of trends in the past ten years. In the estimates relating to highways and railways in particular, it was assumed that measures should be taken to ensure development of road transport within economic limits.

b. Sea transport on external routes has been distinguished from sea transport on domestic routes. The data at hand is sufficient only to estimate the transportation relating to Turkey's foreign trade.

c. Freight transport by air accounts only for a very small share of the total and has therefore not been included.

(*) These roads are open to traffic all through the year. On certain sections however, snow is not cleared as it should.

TABLE 295 — Estimated Demand for Passenger Transport

(Million Passenger - Km.)

Years	Road	Index	Rail	Index	Sea	Index	Air	Index	Total	Index
1962	12590.0	100.0	4166.5	100.0	470.0	100.0	169.9	100.0	17397.3	100.0
1963	13463.9	106.9	4605.6	110.5	477.0	101.4	190.4	112.0	18736.9	107.7
1967	17489.4	138.9	6912.8	165.9	510.0	108.5	300.0	176.5	25212.2	144.9

TABLE 296 — Estimated Demand for Freight Transport

(Million Ton - Km.)

Years	Road	Index	Rail	Index	Sea	Index	Total	Index
1962	4319.8	100	4091.9	100.0	1680.0	100.0	10051.17	100.0
1963	4751.8	100	5076.1	125.2	1764.0	105	11591.9	115.3
1967	6957.1	161	7147.9	176.4	2144.1	127.6	16249.1	161.6

INVESTMENTS

TABLE 297 — Investments in Land Transport

(1) Railways

(Million TL.)

	1963		1964		1965		1966		1967		Grand Total	
	F.C.	Total	F.C.	Total	F.C.	Total	F.C.	Total	F.C.	Total	F. C.	Total
Maintenance	30.0	100.2	30.0	120.4	28.0	150.6	33.0	251.4	37.0	283.4	158.0	906.0
Continuing works	8.0	42.8	10.6	18.8	9.6	18.9	—	6.7	—	—	28.2	87.2
New works	—	16.5	13.9	23.0	13.5	54.0	15.1	73.7	—	229.5	86.6	396.7
TOTAL	38.0	159.5	54.5	162.2	51.1	223.5	48.1	331.8	37.0	512.9	272.8	1389.9

(2) Highways

(Million TL.)

	1963	1964	1965	1966	1967	Total
Research	20.0	20.0	20.0	20.0	20.0	100.0
Maintenance	87.9	135.7	153.7	150.8	165.8	693.9
Continuing works ...	131.4	23.0	23.1	—	—	177.5
Major repairs	21.3	23.9	24.4	34.1	39.1	142.8
New works	286.9	337.4	348.9	365.8	354.9	1693.9
TOTAL	547.5	540.0	570.1	570.7	579.8	2808.1

(3) Total Highway and Railway Investments

(Million TL.)

	1963	1964	1965	1966	1967	Total
Railway	159.5	162.2	223.5	331.8	512.9	1389.8
Highway	547.5	540.0	570.1	570.7	579.8	2808.1
TOTAL	707.0	702.2	793.6	902.5	1092.7	4198.0

TABLE 298 — Investments in Transport Vehicles

(Million TL.)

	1963	1964	1965	1966	1967	Total
Land	50.0	200.0	220.0	467.2	546.2	1483.4(*)
Rail	77.6	105.8	129.9	149.5	213.9	676.7
Air	—	—	—	—	—	—
Sea	30.6	42.0	70.8	70.0	90.0	303.4
TOTAL	158.2	347.8	420.7	686.7	850.1	2463.5

VALUE ADDED

TABLE 299 — Value Added in Transportation

(Million TL.)

Years	Land	Index	Rail	Index	Sea (Cabotage)	Index	Sea (Ext.)	Index	Air	Index	Total	Index
1962	977.9	100	348.9	100	—3.7	100	286.6	100	40.3	100	1650.0	100
1963	1060.6	108.4	437.7	125.4	—2.4	135.1	359.7	125.5	45.1	111.9	1900.7	115.1
1967	1466.2	149.2	615.9	176.5	0.3	208.1	503.9	175.9	71.1	176.4	2659.9	161.1

MEASURES

a. A central administration will be set up for the whole sector.

(1) The Ministry of Transport and Communications will be reorganized so as to be in a position to implement the transport policy which will cover the determination of principles for the establishment of a transport network, as well as that of tariffs.

(2) An interministrial High Board of Transport will be established which will determine and supervise the implementation of a consistent transport policy with regard to the establishment of a transport network, administration and pricing.

b. The transport sector will be managed according to the principles of transport economy. Rail transport is efficient over long distances and where there is traffic density. The development of rail transport will be encouraged in such cases. Measures will be taken to operate railways on more economical and efficient lines. There will also be a differentiation between transport systems according to the freight carried.

c. (1) The principle of asking those who use highways to contribute a reasonable amount towards maintenance and depreciation costs will be adopted.

(*) Land transport vehicle requirements amount to 7 678.8 million TL. As some vehicles are included in development projects and expenditures, only 1483.4 million TL. of this amount is shown in the table.

(2) Transport taxes will be harmonized.

d. Both in railways and highways, the roads to be constructed will conform to the needs of the country and to modern contsruction techniques.

(1) Until recently, it was considered that the increase in railway capacity would lead to an increase in traffic. It is now obvious that this is not the case. From now on, investments will be directed to meet developments in demand and will be of the required standard.

(2) The pyhsical standards of highways are poor, but geometric standards are in excess of requirements. Physical standards will be raised and geometric standards will be determined anew according to the needs of the country.

(3) All smaller towns lacking road connections will be provided with these connections even if traffic density does not warrant it.

(4) In the construction of railroads, the aim will be to assure economies in construction and economic administration.

(5) Railway standards will be improved by carrying out technically justified alterations.

(6) Constructional departments will keep in mind the needs of operational departments in preparing and implementing construction programs.

(7) Emphasis will be laid on the construction of town-village and forest roads in the next program. Provincial administrations will participate in a suitable manner in this construction.

The construction of these roads will be directed by the State Highway Department. The possibility of having forest roads built by the State Highways is also being investigated. If this principle is adopted, the Forestry department will assume the cost of this program.

(8) Research on transportation systems especially in connection with traffic will be accelerated.

(9) Priority will be given to the construction of highways which help to develop tourism.

e. Numerous agencies are responsible for applying the rules and regulation pertaining to highway transport. For this reason, highway transport is not serving the economy as it should. A Highway Transport Directorate will be set up, which will apply the present rules and regulations more effectively, and in accordance with the general policy for highway transport.

f. Administrative measures will be taken to meet seasonal and regional fluctuations with small capacities.

g. Full authority will be given to public transport agencies, in fixing tariffs, making tariff agreements and reductions, etc. The Ministry to which these agencies are attached will only determine the general policy.

h. Land transport vehicles will be standardized and there will be less variety in spare parts. High power vehicles will be used only for trucks and buses, passenger cars will be small economic types.

PORTS AND HARBORS

Only the larger harbors are studied in this section. These are the harbors of Haydarpaşa, Derince, Mersin, İskenderun, Samsun, Istanbul, İzmir and Trabzon. The first five are operated by the State Railways and the other three by the Turkish Maritime Bank. The reasons for considering these harbors only are as follows :

— 62.6 per cent of the total volume of loading and unloading takes place in these harbors;

— the inland area they service practically covers the whole country;

— import - export shipments take place through these ports.

PRESENT SITUATION

a. Total loading and unloading tonnage in these ports is shown in Table 300.

TABLE 300 — Loading and Unloading Operations

(Thousand Tons)

Harbors	1960	1950-60 average (*)
İstanbul	1 800	1 926
Haydarpaşa	825	863
İzmir	674	734
Samsun	376	346
Mersin	387	353
Derince	338	297
İskenderun	1 255	1 152
Trabzon	170	144
TOTAL	5 825	5 815

b. The capacity of any port depends as much on the number of shifts worked as on its facilities and equipment. Three eight-hour shifts per day can be worked in ports. In the second and third shifts, productivity is generally lower than in the first. Table 301 shows yearly capacities on the basis of single eight-hour shifts.

(*) Figures for İstanbul, İzmir and Trabzon are the 1953-1960 average.

TABLE 301 — Capacity of Harbors, 1962 (Thousand Tons)

İstanbul	2 190
Haydarpaşa	2 310
İzmir	1 095
Samsun	996
Mersin	1 104
Derince	952
İskenderun	2 205
Trabzon	548
TOTAL	**11 400**

DEMAND

Total demand calculated on the basis of the import-export volume and trends in domestic freights is shown in Table 302.

TABLE 302 — Demand

(Thousand Tons)

	1962		1963		1967	
	Volume	Index	Volume	Index	Volume	Index
İstanbul	2 251	100	2 280	101.2	2 556	113.5
Haydarpaşa	1 006	100	1 019	101.2	1 143	113.6
İzmir	855	100	866	101.2	971	113.5
Samsun	400	100	406	101.5	455	113.7
Mersin	411	100	416	101.2	468	113.8
Derince	346	100	351	101.9	393	113.5
İskenderun	1 342	100	1 359	101.2	1 524	113.5
Trabzon	162	100	164	101.2	184	113.5
TOTAL	**6 773**	**100**	**6 861**	**101.2**	**7 694**	**113.5**

INVESTMENTS

As can be seen from the above tables, there is no need for capacity increasing investments. Capacity shortage in the port of İstanbul may very well be compensated by the capacity of the Haydarpaşa harbor. Moreover, the capacity figures given in the tables are calculated on the basis of single daily shifts.

However, the following investments are necessary.

TABLE 303 — Port and Harbor Investments

(Million TL)

	1963	1964	1965	1966	1967	Total
Unfinished Projects	113.2	27.3	15.0	—	—	155.5
Equipment	5.2	6.6	6.5	7.2	17.2	42.7
New Projects						
a) Ports for shelter	30.2	24.4	14.8	8.6	10.1	88.1
b) Small ports for tourism	2.0	2.0	2.0	1.0	1.0	8.0
TOTAL	**150.6**	**60.3**	**38.3**	**16.8**	**28.3**	**294.3**

VALUE ADDED

Total value added to be contributed by these ports and harbors is shown in Table 304.

TABLE 304 — Value Added

(Million TL.)

Years	Value Added	Index
1962	47.3	100.0
1963	48.4	102.3
1967	54.3	114.7

MEASURES

a. All ports and harbors will be managed by a single organization.

b. Haydarpaşa port will be reorganized so as to handle chiefly inland shipments from İstanbul to Anatolia.

c. Free Areas or Ports.

In view of their importance for the devepolment of transit trade, the possibility of setting up free ports and areas in appropriate Turkish harbors will be examined.

AIRPORTS

PRESENT SITUATION

Until very recently air transportation was served by 29 airports of different kinds. With slight changes, the number was reduced to 26 in 1962. Some of these airports are military establishments. Two are open to international air traffic.

1960 landing and take-off records and the capacities of the airports that are open to traffic in 1962 are shown in Table 305.

TABLE 305 — Situation of Airports (*)

Airplanes	Adequate Airports	Airports in operation	Actual Capacity	Capacity per days worked	Percentage of utilization
DC-3	24	24	22752	245877	9.25
F-27	16	7	6411	228448	2.8
Viscount	10	5	5374	146942	3.65
DC-7	3	2	2664	74460	3.57
Caravelle	3	2	2226	74460	2.98
Boeing 707	3	2	2408	74460	3.23

(*) Yalova and Kayseri airports are not included.

DEMAND

During the plan period, air traffic will increase at a rate of 15.4 per cent per year. Even with this increase, it will not be possible to make full use of surplus capacity in the plan period.

INVESTMENTS

Airports have excess capacity. There is no need for capacity increasing investments. Only the projects that are already started will be completed and the necessary investment for equipment will be made.

The import component of these investments (carried out entirely by the State) amuonts to 70 million TL.

MEASURES

a. There are two separate organizations for the construction and operation of airports. One is the "Airport and Fuel Storage Construction Directorate", and the other,

TABLE 306 — Investments for Airports

(Million TL.)

	1963	1964	1965	1966	1967	Total
Unfinished Projects	5.4	—	—	—	—	5.4
New Investments	22.28	22.28	22.28	22.28	22.28	111.4
TOTAL	**27.68**	**22.28**	**22.28**	**22.28**	**22.28**	**116.8**

"the Administration of State Airports", which deals exclusively with airport operations. Cooperation between these two agencies should be improved in order to eliminate over-staffing and organizational over-expansion.

b. In places where a military and civil airport exist side by side, the more suitable of the two will be chosen and utilized for air traffic. Maintenance and development expenditures will be made for the selected airport only. (These provisions will not be applied in the case of overrulling military requirements).

c. The security equipment of airports will be increased.

COMMUNICATIONS

BASIC PRINCIPLES AND METHODS

a. The most important investments in communications will be for telephone services. Apart from certain operational defects, there are no bottlenecks in telegraph and postal services.

b. Since the capacity of telegraph and postal systems is flexible enough to meet growing demand, these services are not considered separately.

c. Investments for improving the quality, speed and reliability of postal and telegraph communications are envisaged.

d. Requirements for telephone services were calculated on the basis of previous trends and the accumulated unsatisfied demand.

PRESENT SITUATION

a. Operation of Communications

All communications are operated by the State.

(1) Postal Services

1960 figures for postal services are given below.

TABLE 307 — Number of postal articles handled,

(Thousand units)

Domestic Mail	227 723
Overseas Mail	16 668
Legal Notices	50 278
Parcel Post	3 436
Money Orders	10 670
Parcel payable at destination	471

(2) Telegraph Services

TABLE 308 — Number of Telegrams, 1960

(Thousand units)

Total	Domestic telegrams	Overseas telegrams Incoming	Overseas telegrams Outgoing	Overseas telegrams Total
10 737	9 908	403	426	829

(3) Telephone Services

TABLE 309 — Telephone Communications, 1960

Local Calls (Thousands)	Inter-city Calls (Thousands)	International Calls			Number of Subscribers
		Incoming (Minutes)	Outgoing (Minutes)	Total (Minutes)	
268 233	12 551	345 000	632 000	977 000	183 000

b. Capacity

(1) Postal Services

Postal services are able to meet requirements fully.

(2) Telegraph Services

The figures for telegraph services show physical capacity.

TABLS 310 — Length of Telegraph Lines

General road length (Km.)	Single iron Conductor (Km.)	Multi-purpose channels (Km.)	Total (2+3) (Km.)	Carrier channels (Km.)	Total length of telegraph lines (4+5) (Km.)	Number of Carrier channels
32 700	36 102	28 194	64 206	1 129,2	37 738	326

(3) Telephone Services

TABLE 311 — Capacity of Telephone Services, 1960 (Units)

Exchange Capacity			Total	Network Capacity
Automatic	Semi-automatic	Magnetic		
152 100	6 600	41 488	200 188	287 000

TABLE 312 — Length of Telephone Circuits, 1960

Copper Circuit (Km.)	Iron Circuit (Km.)	Total (1+2) (Km.)	Carrier Channels (Km.)	Telephone Circuit (3+4) (Km.)	Charrier Channels (Unit)
28 030	9 595	37 625	152 344	189 969	431

DEMAND

Insufficiency exists only in telephone services. Demand and supply estimates for telephones are shown in Table 313.

TABLE 313 — Demand and Supply for Telephone Exchanges (In thousands)

Years	Exchange Capacity	Index	Network Capacity	Index	Number of Subscribers	Index	Number of Applicants	Index
1962	215	100.0	310	100.0	192	100.0	193	100.0
1963	278	129.3	419	135.1	197	102.6	191	104.8
1967	508	236.2	672	211.9	400	208.3	100	54.6

INVESTMENTS

a. Total investment in communications in the five-year period is shown in Table 314. As a result of this investment, 421 connections will be established, 547 inter-city networks will be improved and 100 new inter-city networks will be established.

b. These investments will be self-financed.

TABLE 314 — Investments (Million TL.)

Years	In foreign currency	Total
1963	165	237.5
1964	147	211.8
1965	142	202.2
1966	114	190.0
1967	83	165.4
Total	**651**	**1 006.9**

VALUE ADDED

Value added in the communications sector is shown in Table 315.

TABLE 315 — Value Added (Million TL.)

Years	Value Addded
1962	350
1963	369
1964	451
1965	523
1966	571
1967	659

MEASURES

a. An initial payment to provide for installation costs will be collected from new telephone subscribers.

b. Dual tariffs will be applied to inter-city calls.

c. Telephone transfers between users will be stopped and subscribers who end their contracts will deliver their telephones to the Post, Telegraph and Telephone Administration.

d. Unless there are compelling reasons, post offices will not be established in places where the volume of postal operations is low. These services will be performed by agencies or dealers.

RADIO

BASIC PRINCIPLES AND METHODS

Radio is a very effective instrument in education and in assuring national unity. The establishment of radio stations will be considered as a means of meeting a social need.

PRESENT SITUATION

Existing radio stations are shown in Table 316.

TABLE 316 — Radio Stations

Location	Power Kw.	Type
Ankara	2×120	Long Wave National Broadcasting Station
Istanbul	150	Medium wave regional station
Istanbul	2	" " provincial station
Ankara	2	" " " "
Izmir	2	" " " "
Adana	2	" " " "
Antalya	2	" " " "
Gaziantep	2	" " " "
Kars	2	" " " "
Erzurum	1	Short " " "
Ankara	100	" " Overseas Broadcasting Station
Ankara	20	" " " " "

Besides the stations in the above table, two more 300W. short wave transmitting stations exist in Van and İzmir which were taken over from the Soil Products Office (TMO). The İzmir station broadcasts the İzmir provincial radio program. The 300W. short wave stations of Diyarbakır and İskenderun which are operated by the Soil Products Office, broadcast at certain hours of the day. The total number of radio receiving sets in Turkey is 1 426 500.

INVESTMENTS

Broadcasts of the Turkish radio stations are not received clearly throughout the country. To secure clear listening, 4 or 5 new transmitting stations must be erected in various regions. Investments of 80 million TL. have been planned for this purpose.

SERVICES

PUBLIC SERVICES

PRINCIPLES AND METHODS

For rapid and balanced development, importance must also be attached to public services next to ecomonic topics. To eliminate the present disequilibrium between social groups and between regions and to raise living standards, investments in public services must follow an order of priorities which will permit the best use of available resources and the most suitable distribution of these services.

The expansion of public services is one of the goals of the development plan. The main principles to be observed in this regard are the following;

a. To raise the standard of public services;

b. To aim at equality of benefit from public services; thus, the principles of social justice will be established;

c. To remedy imbalances in the regional distribution of public services;

d. To reorganize the distribution of services in a way which will best serve the development of settlement units, thereby ensuring that village communities, which are at present dispersed and extremely small, benefit fully from these services.

e. To encourage and make full use of the voluntary participation of the public in those services.

f. To develop contacts and cooperation between public service agencies and the people, and make this cooperation more productive.

PRESENT SITUATION OF PUBLIC SERVICES

Public services today are qualitatively inadequate and unequally distributed.

a. A combined index has been prepared to show conditions in provinces with respect to various economic, social, transport and municipal services. If the average for Turkey is taken to be 100, the indices of the 67 provinces range between 18 to 258. This is enough to show the unbalanced distribution of public services. The location according to regions of the provinces with indices above the national average is shown in Table 317.

TABLE 317 — Population of Provinces with Indices above the national Average and as per cent of total Population

(In Millions)

Regional location	Population of the region	Population of the provinces of the region with indices above the average for Turkey	As per cent of population of the region	As per cent of total population
Marmara	5.2	2.2	42.6	8.0
Ege	2.9	1.1	36.5	3.8
Karadeniz	5.6	0.6	10.1	2.0
Akdeniz	2.9	1.2	41.7	4.3
Inner Anatolia ...	6.4	1.7	26.7	6.1
East Anatolia	3.0	0	0	0
S. E. Anatolia ...	1.7	0	0	0
Total for Turkey	**27.7**	**6.8**	**24.3**	**24.3**

b. One of the factors which explain the uneven distribution of services is that the units of settlement are widely scattered. This dispersion must be considered both on a nation-wide scale and in terms of the development of these settlement units. Recent studies show that there is a significant increase in the number of small settlement units. This raises the cost of providing these units with services and of building the relevant facilities beyond actual possibilities. To remedy this, and to confirm to social justice principles and quality requirements, services must be distributed in a way which will best assure the consalidation of these settlements into larger units.

c. Another major problem is the continous change in settlement sites due to temporary settlements. A policy to clarify and stabilize the situation is needed.

d. It has not been possible to ensure that the wealthier of those who benefit from these services contribute to their cost.

e. There is great negligence in the upkeep of public service facilities. Steps must be taken to prevent this wastefullness.

SUB - SECTORS OF PUBLIC SERVICES

Public services were considered under the following headings :

1. EDUCATION

Education is studied in the section on "Manpower, Employment and Education".

2. COMMUNITY DEVELOPMENT

The program for community development is outlined in the relevant section.

3. HEALTH

a. Main principles and methods

(1) The main objective of the health program is to improve the health of the people. Priority is therefore given to the expansion of public health (preven tive services) in the plan. These services include the improvement of environmental sanitation, health, education, control of contagious diseases, improvement of nutrition and family planning. Curative health services are considered as complementary to preventive services. Priority is given to the establishment of health services which will extend to the smallest communities and will lay stress on home and out-patient treatment rather than on the more expensive system of hospitalization from which fewer people benefit.

(2) Due to the insufficiency of medical personnel, these goals can only be attained in the long-run. Therefore, health programs were planned in a fifteen-year perspective and so as to make the most productive use of both existing personnel and the personnel to be trained in the future. The number of personnel and the investments implied by these programs were calculated on the basis of the standards set for the establishment of each unit.

b. Situation

(1) Diseases

Diseases with the highest morality rate are heart diseases, various children's diseases, tuberculosis and other contagious diseases. Trachoma, leprosy and hookworm are endemic diseases. Malaria has been almost completely eradicated.

(2) Public health services

The present level of sanitation conditions and health services is low, and varies greatly between regions. Moreover there is insufficient coordination between the various public health institutions which should work together. Campaigns against infectious diseases can be regarded as fairly satisfactory.

(3) Health Institutions

(a) Table 318 gives the numbers of health schools and of students they train every year.

TABLE 318 — Medical and Health Schools and Graduates

Schools	Number	Yearly Graduates
School of Hygiene	1	100 (1)
Faculities of Medicine	3	400
Dentistry Schools	1	50
Pharmacy Schools	2	50
Nursing Collages	4	30
Health Schools	15 (2)	350
Schools for village midviwes	14 (3)	350

(b) Health laboratories are inadequate in number and quality. Shortage of personnel in this field creates a serious problem.

(c) In 1961 the number of hospital beds, including military hospitals, was 62,000 or 21 beds for each 10,000 people. This insufficiency is further aggravated by the fact that 30 per cent of existing beds cannot be utilized for various reasons and full use is not made of the rest. Furthermore, the distribution of beds by province is unbalanced. The situation can be seen clearly from Table 319.

TABLE 319 — Distribution of Hospital Beds by Province

Number of beds per ten thousand people	Number of Provinces
1 — 5	15
6 — 10	34
11 — 15	13
16 — 20	1
21 and over	4

Note : Military hospitals are not included

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(1) Number of graduates in 1965.

(2) The five different branches of the Yenişehir Health School were considered as five separate schools.

(3) The senior class of 8 Midwifery Schools is taught in a separate town.

(4) Health Personnel

The numbers of doctors, dentists, pharmacists and other auxiliary health personnel are very limited and their distribution by region and occupation is unbalanced. The situation is shown in Tables 320 and 321. Imbalance is also illustrated by the lack of vacancies in therapeutic personnel as against 40 per cent vacancies in preventive medicine. Another example of imbalance is that more than half of the doctors are specialists or training to become specialists.

The largest shortage is in auxiliary health personnel. The gravity of the matter is best illustrated by the fact that there is only one nurse for every 37 beds in the hospitals of the Ministry of Health. In countries where hospital services are adequate, the number of beds per nurse is 2.5.

TABLE 320 — Health Personnel employed in 1961

Personnel	Number
Physicians	6900
Nurses and assistant nurses	2050
Health officers	3040
Midwives	3140

TABLE 321 — Distribution of Doctors by Province, 1962

Province	Number of inhabitans per Doctor
Istanbul	635
15 developed provinces	2 600
The remainning 51 provinces	9 400

Note : Developed provinces are Izmir, Manisa, Aydın, Muğla, Antalya, Adana. Içel, Hatay, Gaziantep, Bursa, Kocaeli, Zonguldak, Ankara, Sakarya and Eskişehir.

(5) Health Service Organization

The main organization concerned with preventive and curative health services is the Ministry of Health and Social Welfare. Therapeutic services are also provided in a dispersed way by other Ministries, by State Economic Enterprises, the Workers Insurance, local administrations and the private sector. Various public institutions supplement the efforts of the Ministry of Health and Social Welfare, but these activities are unproductive because of lack of cooperation.

c. Health Objectives

(1) The problems to be taken up include training of personnel, organization of of health services, reaching out to remotest villages, improvement of environmental sanitation, health education, maternity and child care, mental health, increased laboratories, school health, family planning, control and

eradication of contagious diseases, establishment and operation of dietetic and therapy centers, and storage, repair and maintenance of medical equipment. The following programs will be applied to help solve these problems.

(a) Program for the Training of Personnel

The aim is to meet the requirements of health schools for teachers ,buildings and equipment and to provide the personnel most needed for health services at the end of fifteen-year period.

(b) Program for the Operation of Health Services

The first step in health services is to set up health units with a coverage of about 7,000 persons, which will bring preventive and curative medicine to the people. The second step is to establish regional health centers, covering about 50,000 people. At this level the establishments concerned are hospitals, dispensaries, and preventive health units. The third step is that of provincial health directorates which are purely administrative in nature. As fourth step, Turkey will be divided into 16 regions in each of which large regional hospitals, hygiene schools, regional laboratories, warehouses and repair shops will be established. In addition, the central organization of the Ministry of Health and Social Welfare must be reorganized so as to apply this program and be the sole authority in control of health services.

(c) Program for the Control of contagious Diseases.

(I) Program for the eradication of malaria :

The present program for the eradication of malaria will continue to be applied.

(II) Program for the control of tuberculosis

Action will consist primarily in vaccinating all predisposed persons, in early diagnosis, and in setting up an organization which will make treatment at home possible.

(III) Program for the control of trachoma

This program aims at improving environmental sanitation and providing health education in addition to treatment. In places where health units are not yet established or where trachome is widespread, these services must be performed by a special organization.

(iv) Program for the control of leprosy

It should not take more than ten years to eradicate leprosy. In areas where health units have not yet been set up and leprosy is endemic, a special organization must be created to detect and treat the diseased.

(v) Control of venereal diseases, syphilis, and other contagious diseases will be assured by health units, dispensaries of regional health centers, and hospitals.

(d) Maternal and child health, especially child health, is an essential part of general health services; one of the most important functions of health units, therefore, will be to improve maternal and child health. Maternity and pediatry hospitals will also have their share in these functions.

(e) Laboratory Program

The aim is to expand existing institutions and establish new ones so that there will be one laboratory in every regional health center within fifteen years.

(f) Workers' Health Program

This program involves the construction of special dispensaries for workers in cities with over 10,000 workers.

(g) Program for Storage, Maintenance and Repair.

It is intended to build warehouses in regional centers (which will make it possible to meet the needs of health establishments on a steady basis and to buy supplies at cheaper prices), to improve maintenance and repair services, to reduce costs and to apply standardization.

(h) Program for Hospitals

The aim is to develop services in existing establishments and raise the number of beds per 10,000 people to 23 by 1967 and to 25 by 1977.

(2) Table 322 shows the health targets to be achieved in the plan years.

d. Investments

(1) Total investments in health services and investments for each program are shown in Table 323.

(2) Current development expenditures on health services in the plan period are shown in Table 324.

(3) The foreign exchange requirements of health programs are shown in Table 325.

e. Measures

(1) General Measures :

The measures to be taken in order to carry out health services as a whole more efficiently are the following :

(a) Organizational Measures

A single organization will be in control of all public health services (except those of a special nature of the Ministry of Defense); until this is assured, measures to establish closer cooperation will be taken.

TABLE 322 — Progression of Health Programs

(End of year unit numbers)

Programs	1962	1963	1967	1977
Health Units	—	300	1 500	4 500
Malaria eradication services	328	328	328	328
Tuberculosis Control				
— BCG Retest teams	3	5	10	10
— BCG Vaccination teams	70	80	100	100
— Dispensaries	104	104	118	168
— Itinerant treatment teams	—	15	75	155
Trachoma control services	35	60	60	60
Leprosy control dispensaries	8	10	17	17
Hygiene Institutes	3	3	5	16
Workers' Health Centers	—	—	31	46
Warehouses and repair shops	—	2	8	16
Hospitals (Number of beds)				
— Ministry of Health	33 500	34 800	40 000	95 000
— Workers' Insurance	3 200	3 200	5 500	—
— Other public establishments (*)	21 000	21 000	23 000	—
— Private establishments	4 400	5 200	9 000	18 000
Total number of beds	**62 100**	**64 700**	**77 500**	**113 000**
Ministry of Health set-up				
— Regional groups	—	3	16	16
— Provincial health directorates	67	67	67	67
— Health centers	—	50	250	530
Health Schools				
— Public Health Academy	1	1	1	1
— Nursing colleges	4	4	4	10
— Health colleges (**)	15	15	21	31
— Schools for Village Midwives (***)	14	14	20	20
— Medicial Faculties	3	3	8	8
— Dentistry Schools	1	3	8	8
— Pharmacy School	4	2	2	2
— Home Economics Schools	1	2	6	16
— Hospital Administration School	—	1	1	1
— Dietetics School	—	1	1	1

(*) Including military hospitals.

(**) There are 15 independent departments in 11 Schools.

(***) The senior class of 8 schools is taught in another town.

TABLE 323 — Health Investments

(Million TL.)

Programs	1963	1964	1965	1966	1967	Total
Health units	50.3	50.3	50.3	70.3	70.3	291.5
Public health services	11.9	12.5	10.6	12.6	9.3	56.9
Hospitals	119.3	146.3	191.3	166.3	138.3	761.5
Administrative services and other ...	19.0	21.0	26.0	71.0	100.0	237.0
TOTAL	**200.5**	**230.1**	**278.2**	**320.2**	**317.9**	**1346.9**

TABLE 324 — Current Development Expenditures

(Million TL.)

Programs	1963	1964	1965	1966	1967	Total
Health units	50.5	101.0	151.5	202.0	252.5	757.0
Public health services	74.2	86.2	98.8	106.0	118.5	483.7
Hospitals	456.4	473.8	494.2	524.6	551.0	2500.0
Administrative services and other ...	45.0	75.1	102.3	137.4	167.5	527.3
TOTAL	**626.1**	**736.1**	**846.8**	**970.0**	**1089.5**	**4268.0**

Note : Current development expenditures include expenditures by public establihments not belonging to the Ministry of Health and Social Welfore.

TABLE 325 — Foreign Exchange Requirements of Health Programs

(Million TL.)

Years	1963	1964	1965	1966	1967	Total
Foreign Exchange Requirements	70.0	90.0	110.0	120.0	110.0	500.0

(i) The School of Hygiene must carry out research work and provide training in the field of public health.

(ii) Measures will be taken to assure cooperation between the Ministry of Health and Social Welfare and other public institutions with regard to such matters as improvement of environmental sanitation, health education, population planning and nutrition.

(iii) Environmental sanitation services can be performed only with the large-scale participation of the people. Measures to secure this participation will be taken mainly within the framework of community development programs.

(iv) An industry will be set up to prepare the products needed for bacterial culture.

(v) The preparation of vaccines and serums by each of the Ministries of Agriculture, National Defense, and Health and Social Welfare will be taken over by one controlling agency.

(ii) In places and communities which have a special position, appropriate special health facilities will be established.

(iii) In the exercise of their duties, even the lower grade personnel will have authority and responsibility.

(b) Measures Concerning Personnel

(i) More emphasis must be given to community medical services at all levels of medical education.

(ii) Consideration will be given to administrative and financial measures designed to encourage medical personnel to stay in Turkey and not to give up their profession.

(iii) Steps will be taken to bring about a more balanced functional and regional distribution of medical personnel.

(c) All the necessary measures will be taken to give effect to the law on the nationalization of health services.

(2) Specific Measures

Specific measures to be taken in various fields for the implementation of programs are as follows :

(a) Measures related to public health services

(b) Measures concerning hospitals

(i) Until the administration of services has been unified, public agencies will continue to establish their own hospitals. Efforts will be made, however, to assure that the newly established hospitals are grouped together in health sites and if possible in the same district.

(ii) Public agencies must make arrangements for the mutual utilization of their hospital facilities, there-by assuring the better use of beds.

(iii) State hospitals should not be constructed below an optimum size.

(iv) Measures will be taken to encourage private initiatives for the construction of hospitals.

(v) The possibilities for converting hospitals into establishments with revolving capital will be explored.

(c) Since malaria cannot be eradicated and anti-malaria measures may have to be taken permanently if any delays occur in malaria control, the program for malaria eradication will be integrally applied.

(d) Measures concerning the pharmaceutical industry :

(i) The domestic pharmaceutical industry will be encouraged.

(ii) The misuse of licences in the pharmaceutical industry will be strictly controlled and regulations will be issued to this effect.

(iii) The prices of pharmaceuticals will be supervised closely by the Ministry of Health.

(iv) Pharmaceuticals will be carefully tested and the relevant services of the Refik Saydam Hygiene Institute will be reinforced for this purpose.

(e) Studies will be initiated in connection with the setting-up of a health insurance scheme.

TABLE 326 — Number of village with and without water supply, according to the regional classification of the State Hydraulic Works

Regions	Total number of villages and parishes	Number of villages and parishes with water	Number of villages & parishes with no or insufficient water
REGION I. Balıkesir, Bursa, Çanakkale, İstanbul, Kocaeli	3 562	1 470	2 092
REGION II. Aydın, Denizli, İzmir, Manisa, Muğla, Uşak	4 403	2 577	1 826
REGION III. Bilecik, Bolu, Eskişehir, Kütahya, Sakarya	3 709	1 900	1 809
REGION IV. Afyon, Konya, Niğde	1 834	998	836
REGION V. Ankara, Çankırı, Çorum, Kastamonu, Zonguldak	10 459	4 972	5 487
REGION VI, Adana, Gaziantep, Hatay, İçel, Maraş	4 501	1 338	3 163
REGION VII. Amasya, Giresun, Ordu, Samsun, Sinop, Tokat	7 011	3 632	3 379
REGION VIII. Ağrı, Artvin, Erzincan, Erzurum, Gümüşhane, Kars, Rize, Trabzon	7 920	4 144	3 776
REGION IX. Adıyaman, Bingöl, Elâzığ, Malatya, Tunceli	5 076	2 429	2 647
REGION X. Bitlis, Diyarbakır, Hakkâri, Mardin, Muş, Siirt, Urfan, Van	6 296	2 224	4 072
REGION XI. Edirne, Kırklareli, Tekirdağ	729	90	639
REGION XII. Kayseri, Kırşehir, Nevşehir, Sivas, Yozgat	2 919	1 905	1 014
REGION XIII. Antalya, Burdur, Isparta	1 013	514	499
TOTAL	59 432	28 193	31 239

4. OTHER PUBLIC SERVICES

a. Supply of Drinking Water

(1) Present Situation

There are 1004 municipalities in Turkey. In the 554 municipalities with a population of over 3,000, supply of drinking water is the responsibility of the Bank of Provinces (İller Bankası). Apart from this, the General Directorate of the State Hydraulic Works (D. S. İ.) is responsible for the water supply of about 60,000 villages and parishes. The water supply of large towns is assured by their municipal services.

At the end of 1961, drinking water facilities were completed or in course of construction in 454 of cities and towns with over 3,000 inhabitants. At the same date, 28,193 villages and parishes had been provided with drinking water.

Cities and towns with no or insufficient drinking water facilities (which will require re-building) number to 546. About half of existing settlement units have totally inadequate drinking water supplies or facilities which are likely to deteriorate still further. The number of people who will therefore have to be supplied in priority with drinking water amounts to 9.5 million.

TABLE 327 — Drinking Water in Towns and Cities

Position	No. of towns and cities
Towns and cities with drinking water	406
Towns and cities with drinking water facilities under construction	80
Towns and cities with no drinking water	100
Towns and cities with drinking water facilities witch require reconstruction	418
TOTAL	1 004

(2) Investments and Targets for Drinking Water Programs

Investments for drinking water supplies in settlement units of over 3,000 inhabitants and in which municipalities are in a position to borrow were calculated with regard to urgency of needs, the number of prospective beneficiaries and the state of existing water supplies and of projects.

Gradually increasing investments for the supply of drinking water to rural communities will be made according to an order of priority based on such criteria as the degree of need, population, cost, and the extent to which voluntary participation of villagers will be forthcoming.

A total of 400 million TL. will be earmarked for the completion of works begun in large cities.

TABLE 328 — Investment for Drinking Water

(Million TL.)

Programs for the Supply of Drinking Water	1963	1964	1965	1966	1967	Total
In villages	60	70	80	145	210	565
In cities of under 100,000	60	70	95	120	130	475
In cities of 100,000 to 200,000	30	35	40	45	50	200
In cities of over 200,000	60	60	75	90	90	375
TOTAL	215	235	290	400	480	1 615

(3) Measures

The different activities connected with the supply of drinking water are carried out by different organizations according to different criteria. In view of its technical nature, this work should be performed by a single agency. Better use would thus be made of the limited technical personnel available.

(b) The case of settlements where the cost of installing drinking water is more than doubled by the scattered layout must be specially studied in order to arrive at productive investments.

(c) Priority must be given to research and measures affording cost reductions in installation of drinking water facilities.

b. Mapping, Cadastre-Register, Town Planning

(1) Present Situation

90 per cent of the country's total area has been mapped at a scale of 1/25,000. 6,716 towns and cities have been mapped. The number of towns and cities which still have to be mapped or remapped is 288.

So far, the cadastre of 800,000 plots has been completed. In addition to the cadastral survey of 70 towns and cities, and area of 53,700 square km. has been surveyed in compliance with the provisions of Law No. 5602.

The town plans of 824 cities and towns were completed or in course of preparation by end of 1961. 361 cities and towns still lack a town plan or should have new town plans drawn up.

(2) Targets

1/5,000 scale maps are most needed for cadastral work in Turkey. By 1982 a total area of 483,000 sq. km. will need to be mapped on this scale. The possibility of speeding up this work, with the help of recent technical advances in this field, will however be closely investigated.

The area to be surveyed cadastrally is estimated at 560,000 sq. km. and the number of city plots requiring cadastre at 2.7 million.

TABLE 329 — Demand for 1/5,000 Scale Maps in the Public Sector

(Square Km.)

	1963	1964	1965	1966	1967
Total	22 878	19 113	21 364	24 378	24 863

TABLE 330 — Average Yearly Demand for Maps

(Square Km.)

Aerial photography	15 000 — 25 000
Scale enlargement	35 000 — 60 000
Photo map	500 — 1 000
Topographic town maps	200

The area to be surveyed cadastrally is estimated at 560,000 square km. and the number of city plots at 2.7 million units.

Maps showing the new layout of 288 towns and cities are required.

Town plans will be prepared for 361 towns in the first five-year period.

TABLE 331 — Program for 1/5,000 scale mapping

(Square Km.)

Years	Area to be mapped
1963	12 000
1964	20 000
1965	21 000
1966	22 500
1967	23 800
Total	**99 500**
1968 — 1972	137 500
1973 — 1977	135 000
1978 — 1982	110 000
Grand Total	**482 000**

It is estimated that annual capacity for urban cadastre will be raised to 150,000 plots. Urban cadastre can be completed in 20 years if this rate is maintained. It is sought to accelerate this work with the help to technological improvements.

(3) Investments

Requirements for topographic and cadastral maps and land cadastre during the first five years were determined with regard to the long term demand of governmental departments. Taking into account the inventories and work programs of the relevant organizations, it is thought that overall targets for the country will be attained only over a period of time exceeding fifteen years. The first five-year investments were planned with regard to the equipment and manpower availabilities of the organizations which will carry out these investments.

Investments for town and city mapping during the first five years were determined on the basis of the work carried out so far in accordance to program, and of projects.

1963-1967 investments for town planning were estimated in the light of present achievements in town planning, the expected development of municipal administrations and the capacity that will be needed for the execution of these programs.

TABLE 332 — Investments for Mapping, Cadastre - Register and Town Planning
(Thousand TL.)

Programs	1963	1964	1965	1966	1967	Total
Town and city maps	5 500	5 500	5 500	5 500	5 500	27 500
Cadastre - register	16 150	12 750	9 250	9 350	9 650	57 150
Town planning	3 800	5 300	3 000	3 000	3 000	18 100
TOTAL	**25 450**	**23 550**	**17 750**	**17 850**	**18 150**	**102 750**

(4) Measures

a. The photogrammetry method will be used to accelerate cadastral mapping and the arial triangulation methods will permit to make full use of evaluation capacity. As far as possible, electronic computing machines will be used to increase the speed of this work

b. A planning board will be set up to ensure cooperation in the cadastral, mapping and town planning studies conducted on the same subject and for the same areas.

c. Importance will be attached to the training of technical and qualified personnel in the fields required and the period of field work will be lengthened.

d. Cadastral legislation must be revised to conform to present conditions.

c. City Sanitation and Sewerage

(1) Present Situation

Due to the exiguity of municipal funds and to technical shortcomings, the quality and quantity of municipal services is inadequate. Many municipalities do not have investment of expenditure accounts for city sanitation services. One of the major conditions for the improvement of environmental health is the proper functioning of sanitation services.

The establishment in all municipalities of sewer systems must be considered in a long term perspective. Even in the main urban centres of İstanbul and Ankara, sewerage exists only in certain parts of the town. However, for the construction and good operation of a sewer system in any town, the capacity of the city water must be at least of 0.25 liters/sec. per hectare. In 1957 there were only 150 towns and cities complying with this norm. Estimated sewer installation costs in sixty of these towns, where these works will be given high priority, are 1.15 billion TL. The construction of a sewerage network in the city of İstanbul only is calculated to amount to 2.5 billion TL.

(2) Investments

It was considered that investments for city sanitation should be twice as high as average investments in the last five years. In calculating total investments, the establishment each year of twenty new municipalities was also taken into account.

Investments for sewerage will be considered at the end of the first five years when there should be an increase in municipal resources. Preparation of projects for this purpose will begin immediately. Investments of 20 million TL. for cleaning polluted waters will be made by local administrations during the plan period.

(3) Measures

(a) As a rule, the funds that municipalities are able to devote to long term program works and investments are very inadequate. People will therefore be enccuraged to participate voluntarily in the construction and operation of the facilities to be provided.

(b) The regulations pertaining to the obligations of citizens with regard to sanitation and the non-pollution of streets will be enforced strictly and research on these subjects will be carried out.

(c) Importance will be given to standardizing the installations and equipment used for these services and to other cost - reducing measures.

(d) Qualified revision and maintenance teams will be set up, to look after municipal utilies and in-service training will be developed.

d. Administrative Buildings

(1) Present Situation

Official buildings in provinces and province districts are of importance in bringing public services to the people and in providing for contacts and cooperation between them and public authorities.

Most administrative buildings ara old and falling down and the various local administrations are gathered together in the provincial center.

(2) Investments

During the plan period, investments of 110 million TL. will be made for prisons, which are a social need.

Investments of 100 million TL. for administrative and other official buildings will be carried out primarily in the less developed regions. Moreover, additional investments of 80 million TL. have been planned for cases where the operation of services is made difficult by dilapidated and dispersed buildings or where high rent is paid for the lease of buildings.

e. Municipal and Other Services

(1) Present Situation

Electricity and gas supply have been discussed in the energy section; bus services and roads, in the transport and communication section; slaughter houses and cold storage in the food section. Municipalities are not able to invest sufficiently in either the above services or in drinking-water, sewerage, libraries, market-places, public-baths and town planning. These are services that should be developed by municipalities. Though municipalities will continue for a time to receive support from the general budget for these purposes, it is however necessary to keep in mind that the basic goal is to develop the municipalities' own resources and in this context to raise the credit municipalities are actually able to obtain and to consider the possibility of mobilizing the voluntary participation of the people in installation expenditures.

(2) Investments

It is planned to invest 40 million TL. in the plan period for the expansion and improvement of services other than those discussed above.

On the other hand, it has been observed that investments for commercial services have increased in recent years. It is excepted that the private sector will invest in this field. Besides making use of existing capacity, it is estimated that the private sector will invest a total of 500 million TL. in commercial services.

On the other hand, it will be necessary to devote 1.265 billion TL. to certain infrastructure investments in other public services.

Total investments in the sub-sectors discussed under public services and the foreign exchange component of these investments are shown in Tables 333 and 334.

TABLE 333 — Investment in Public Services

(Million TL.)

Programs	1963	1964	1965	1966	1967	Total
Drinking water	210.0	235.0	290.0	400.0	480.0	1 615.0
Mapping, cadastre-register, town planning	25.45	23.55	17.75	17.85	18.15	102.75
Urban sanitation, sewerage ...	18.0	18.0	26.0	32.0	36.0	130.0
Municipal services	8.0	8.0	10.0	16.5	20.65	63.15
Administrative buildings	26.0	25.0	30.0	84.0	125.0	290.0
Social welfare	5.6	4.2	4.0	7.0	9.0	29.8
Commercial services	60.0	25.0	60.0	130.0	195.2	470.2
Certain infrastructure investments for public services ...	227.95	87.35	199.25	342.65	407.8	1 265.0
TOTAL	**581.0**	**426.1**	**637.0**	**1030.0**	**1291.8**	**3 965.9**

TABLE 334 — Foreign Exchange Component of Investments in Public Services

(Million TL.)

Programs	1963	1964	1965	1966	1967	Total
Drinking water	25.0	27.5	33.0	38.5	42.0	166.0
Mapping, cadastre-register, town planning	25.45	23.55	17.75	17.85	18.15	102.75
Urban sanitation, sewerage ...	3.6	3.6	5.2	6.4	7.2	26.0
Municipal services	1.6	1.6	2.0	3.3	4.13	12.63
Commercial services	6.0	2.5	6.0	13.0	19.52	47.02
TOTAL	61.65	58.75	63.95	79.05	91.0	354.4

SOCIAL WELFARE

BASIC PRINCIPLES AND METHODS

The object of social welfare programs is to eliminate the social problems arising in various sections of the community. This will be attained by cooperation between the State and the various voluntary welfare institutions .

PRESENT SITUATION

Social welfare activities are performed by various voluntary associations and public agencies in a dispersed way and without program. The number of trained personnel in this field is also insufficient.

TARGETS

Activities will cover such matters as providing guidance and assistance in family planning, seeking solutions to the problems arising in slums, caring for the aged, rehabilitating the physically handicapped and finding work for delinquents on their release from prison.

The targets will be to care for and educate neglected and handicapped children, combat juvenile deliquency, seek solutions to the problems of maladjusted or mentally retarded children, eliminate exploitation of child labor and promote the welfare of children.

INVESTMENTS

The investments which will be made to realize those targets are shown in Table 335.

MEASURES

a. Since social welfare is essentially to be performed through voluntary organizations, coordination boards must be established at the province level to ensure cooperation between the former and public authorities. Steps will be taken to maximize voluntary savings, so that these organizations rely less on public funds, and to ensure the most efficient use of these savings. Official funds will be allocated in priority to organizations who succeed in mobilizing voluntary savings.

b. A Social Welfare Organization will be established to control funds and services.

c. Since there is shortage of personnel in social welfare, training of personnel in this field is extremely important. The existing College of Social Services will be developed.

d. The possibility of establishing social insurance schemes for others than civil servants and workers must be examined.

e. With the object of preventing those who are released from prison and find no work from committing new crimes, measures will be taken to establish a sponsorship organization which will provide them with jobs.

TABLE 335 — Investments **(Thousand TL.)**

Investment Expenditures	**1963**	**1964**	**1965**	**1966**	**1967**	**Total**
Buildings						
For neglected and handicapped children	1 600	1 000	700	1 700	3 000	8 000
Homes for the aged	1 400	700	700	1 400	1 400	5 600
Rehabilitation centers	800	1 000	1 200	1 500	1 500	6 000
Subtotal	**3 800**	**2 700**	**2 600**	**4 600**	**5 900**	**19 600**
Equipment an supplies						
For handicapped children	700	500	300	800	1 500	3 800
Homes for the aged	600	300	300	600	600	2 400
Rehabilitation centers	500	700	800	1 000	1 000	4 000
Subtotal	**1 800**	**1 500**	**1 400**	**2 400**	**3 100**	**10 200**
Total Investment Expenditures	**5 600**	**4 200**	**4 000**	**7 000**	**9 000**	**29 800**

TOURISM

BASIC PRINCIPLES, TARGETS AND METHODS

a. In order to close the gap in Turkey's balance of payments, full advantage should be taken of the development of international tourism which expands with rising incomes. Turkey's natural and historical resources are highly suitable for this purpose. Tourism is expanding in foreign countries and interest in Turkey is gradually increasing. The main principle is to attract this tourist potential to Turkey in as short a time as possible by making the necessary investments. As much attention should therefore be given to publicity and promotion, provision of services and the souvenir trade, as to overnight accomodation.

b. Demand is estimated on the assumption that past trends in the number of tourists to Turkey can be improved.

c. Tourists now coming to Turkey stay an average of four days and spend 60 dollars. It is estimated that these averages can be increased to six days and to 100 dollars by the end of the plan period.

d. As resources will be limited in the next five years it will not be possible to develop more than certain of the various regions suitable for tourism. In order to avoid waste, efforts will be concentrated on regions most likely to attract tourists and where these efforts will yield results in a short time. Attention will also be given to certain developing or already developed tourism centers.

PRESENT SITUATION

a. In 1961, 129 000 tourists visited Turkey and spent 7.5 million dollars in foreign exchange.

b. The number of available overnight accomodations and the number of people who used them in 1961 are shown in Table 336. Only 30 per cent of these accomodations can satisfy the requirements of foreign tourists. The rest are used by internal tourists and tradesmen.

TABLE 336 — Overnight Accomodations and Use Thereof by Regions, 1961

Region	Number of hotels	Number of rooms	Number of beds	Number of guests
Marmara	114	3 545	6 886	526 506
Agean	34	1 214	2 068	331 605
Antalya	7	193	408	33 425
Cilicia	22	644	1 111	121 415
Inner Anatolia	76	3 115	4 947	499 471
Eastern Black Sea	5	178	265	26 000
Grand Total	**258**	**8 889**	**15 685**	**1 538 422**

DEMAND PROJECTIONS AND INVESTMENTS

a. Although no significant effort to promote tourism was made in the last ten years, the yearly number of foreign tourists increased by 12 per cent. With promotion and investment, this rate can be raised to 20 per cent in the next few years. The estimated increase in tourist numbers is shown in Table 337 and the number of beds required to accomodate these numbers in 1967 is shown in Table 338.

TABLE 337 — Number of Tourists in 1962, 1963 and 1967

	1962	1963	1967	1967 Index 1962=100
Number of Tourists	166 000	200 000	415 [illegible]00	250

TABLE 338 — Number of Beds Required for Tourists in 1967 (In thousands)

	Total Beds Required	New Beds Required
a. Total (b+c+d+e)	24.9	20.2
b. Marmara	10.1	8.0
c. Agean	7.3	6.7
d. Antalya	3.8	6.7
e. Other	3.7	1.8

b. Importance will be given to tourism investments in the period 1963-1967 and the necessary basic expenditures will be made to promote the speedy development of this industry. Investments and propaganda and promotion expenditures are shown in Table 339.

c. Important tourism projects include the following:

(1) Establishing holiday villages and camps.

(2) Experimental projects connected with tourism.

(3) Establishing National Parks.

(4) Increase of all means of transportation between Turkey on the one hand and the Balkans, Greece, Italy and Israel, on the other.

(5) Completion of the touristic road known as the "Bible Road."

TABLE 339 — Tourism Investments and Promotional Expenditure, 1963 - 1967
(Million TL.)

	Total	1963	1964	1965	1966	1967
Hotels	380.5	73.0	67.5	73.0	78.5	88.5
Motels	45.2	6.0	6.2	9.0	10.5	13.5
Boarding houses	7.6	0.8	1.0	1.5	2.0	2.3
Restaurants and entertainment places	46.4	5.6	7.3	9.2	11.3	13.0
Holiday villages and camps	74.5	9.0	13.0	17.5	16.0	19.0
Beaches	10.8	1.6	1.8	2.1	2.4	2.9
Health resorts	55.5	11.1	11.1	11.1	11.1	11.1
Touristic attractions (*)	124.1	23.9	24.8	25.8	26.3	23.3
Hunting and fishing	1.0	0.5	0.5	—	—	—
Souvenir trade	15.0	2.5	3.0	3.0	3.0	3.5
Training	22.5	4.5	4.5	4.5	4.5	4.5
Maintenance	43.9	7.0	7.5	8.0	10.0	11.4
Total	**827.0**	**145.5**	**148.2**	**164.7**	**175.6**	**193.0**
Promotional Expenditure	**150.0**	**30.0**	**30.0**	**30.0**	**30.0**	**30.0**

(*) Including the restoration of historical and archeological monuments.

REVENUE FROM TOURISM AND VALUE ADDED

The foreign exchange earnings and the contribution of the tourism industry to national income in the firts five years is shown in Table 340.

TABLE 340 — Revenue from Tourism and Value Added

Years	Dollars spent per tourist	Minimum Revenue from Tourism (Million Dollars)	Maximum Value Added (Million Dollars)
1962	60	10.0	76.2
1963	65	13.0	99.4
1967	100	41.5	325.0

MEASURES

a. In order to attract tourists to Turkey a very good promotional campaign must be carried out. This campaign will be conducted in cooperation with foreign advertizing agencies experienced in this field. Moreover, "Tourist Motivation Studies" and other research connected with tourism will be undertaken in appropriate countries. Internal tourism, which is the forerunner of external tourism, will also be encouraged.

b. An organization will be promptly established and given the necessary authority to deal with all aspects of tourism.

c. The establishment of "Tourism Development Societies" in towns and cities with the participation of the relevant tourist organizations will be encouraged. These societies will plan the development of tourism in their districts, encourage touristic projects and supervise activities. Communities where the societies have demonstrated success in mobilizing local resources will receive priority assistance from the government.

d. Measures will be taken to facilitate the stay of tourists in Turkey, specifically customs and exchange formalities will be simplified, information bureaus will be established and services such as arrangement of trips and rest houses will be provided.

e. The Tourism Bank will be structurally modified and provided with larger resources so that it may extend sufficient credit to meet the needs of the tourism industry.

f. Legislative provisions and regulations which impede the development of tourism will be modified.

g. The possibility of holding festivals at certain periods and in certain places and of organizing Olympic games in Turkey during the second five year period will be investigated.

h. Priority will be given to training personnel for tourism.

i. The possibility of temporarily exempting newly constructed hotels and motels serving touristic purpose from building tax will be investigated.

j. The possibility of opening official rest camps to tourists will be examined.

k. The use of school and adult education programs to acquaint the local population with regional tourist attractions and works of historical value will be considered.

l. Local efforts to produce and sell refreshments and souvenir articles in touristic centers will be encouraged and organized.

m. The relevant authorities will be given the necessary legal powers to determine the use to be made of the natural touristic resources which should be developed for touristic purposes, and to prevent speculative operations on such sites.

HOUSING

BASIC PRINCIPLES AND METHODS

a. Basic Principles

(1) To assure construction of more housing units without spending for housing more than 20 per cent of total investment.

(2) To assure the construction of a greater number of dwellings affording shelter to a greater number of people by limiting luxury housing and selecting the type of utility housing which is cheapest and most suitable from the point of view of health.

(3) To diminish the rent burden, especially on low income families, by building low rental utility housing and owner-occupied dwellings.

(5) Not to destroy squatter-housing (gecekondu) without finding quarters for their inhabitants. The most important problems are to solve the question of land ownership in these districts, complete and improve public services, and to remove only the worst units by meeting the housing requirements of their inhabitants.

b. Methods

Demand projections and investments in housing were calculated by examining past trends. On the principle that investment in housing should not exceed the present level, these investments will constitute 3.6 per cent of GNP or 20 cent of total invesment. Thus, investment in housing will increase 7 per cent per year on the average. It will be possible to meet housing requirements if a significant portion of these investments goes into building utility housing.

TABLE 341 — 1960 Housing Investment

(Million TL.)

Housing Investment	GNP	Total Investment	Construction Investment	Housing Investment as percent of GNP	Housing Investment as percent of total Investment	Housing Invest. as percent of construction Investment
1 812	48 345	7 779	4.904	3.74	23.30	37

PRESENT SITUATION

Investment in housing in 1960 is shown in Table 341.

Number of habitable dwellings in cities	1 175 000 units
Number of squatter houses (gecekondu)	240 000 units
Number of dwellings in villages	2 000 000 units

36 per cent of the housing in towns is leased and 64 per cent is occupied by the owners. In cities, 37 per cent of the family income goes to rent. 96 per cent of village housing is occupied by the owner and 4 per cent rented.

Average occupancy per room in cities	2.17 persons
Average occupancy per room in villages	2.70 persons
Average occupancy per room in Turkey	2.252 persons

The room situation in urban dwellings is shown in Table 342; the average family size per dwelling unit is 5.1 persons.

41 per cent of urban dwelling units are in good condition, 33 per cent are in moderate condition, 26 per cent are bad. 45 per cent of the population living in Ankara, 21 per cent of that in Istanbul and 18 per cent of that in Izmir live in squatter houses (gecekondu).

In 1960, 56,227 urban housing units were completed in Turkey, of which 32,595 were houses and 23,632 apartments. This indicates that two housing units were built per 1 000 of population. In other countries this figure varies between 3 and 7. The number of new dwelling units constructed annually in villages is estimated at 60 000.

The average size of urban apartments constructed during 1960 is 123 square meters in Ankara, 95 in Istanbul, 120 in Bursa and Adana, and 97 in Izmir. The average size for Turkey is 97 square meters for houses and 76 square meters for apartments.

TABLE 342 — Room Situation in Urban Dwellings

Dwelling units according to the number of rooms	Per cent of dwelling units
One - room	27.4
Two - room	36.4
Three - room	19.0
Over three	7.2

The cost of land varies between 20 to 50 per cent of the cost of the building. The cost of housing built by public sector is 450 TL. per square meters. The cost of constructing apartments in cities, is 320 TL. per square meter without central heating, 380 TL. per square meter with central heating; in smaller towns costs are 250 TL. per square meter for stone construction and 175 TL. per square meter for wooden construction. Housing construction in villages is 80 - 90 TL. per square meter.

Credits for housing construction in 1960 amounted to 633 million TL. or 6.61 per cent of total credits.

TABLE 343 — Estimated Urban Housing Requirements
(In adjusted units)

Years	Requirement resulting from population increase	Requirement resulting from renovation of unuseable dwellings	Requirement resulting from disasters and expropriation	Requirement resulting from the removal of squatter houses	Total Requirement
1962	91 367	10 726	4 700	12 000	118 793
1963	95 936	16 089	4 700	12 000	128 725
1967	116 611	37 541	4 700	12 000	170 852
1975	172 286	37 541	4 700	12 000	226 527

TABLE 344 — Estimates of Housing Requirements in Villages

Years	From population increase	From renovations	From disasters	To reduce overcrowding	Total
1962	71 600	20 650	2 000	10 734	104 984
1963	73 100	20 650	2 000	10 734	106 484
1967	79 800	20 650	2 000	10 734	113 184
1975	95 800	20 650	2 000	10 734	129 184

CALCULATION OF VALUE ADDED

Value added in housing was obtained by taking the rental income of a unit, whether actually rented or occupied by the owner, and by the yield of building and land taxes. Average rental is 141 TL. per month in cities, and 60 TL. per year in villages. The projection of the number of dwelling units was obtained by reviewing existing units, units which will be renovated and units which will become uninhabitable. Taxes were calculated on the basis of the relationship between national income and taxes

TABLE 345 — Value Added
(Thousand TL.)

Years	Income from urban housing	Income from village housing	Taxes	Total
1962	1 988 100	120 000	90 000	2 198 100
1963	2 153 230	123 600	93 000	2 369 830
1967	2 944 277	138 000	117 000	3 199 277

INVESTMENTS

If the idea that housing is to be both larger in size and more luxurious continues, it will be necessary to allocate more money than is alloted for thos purpose at present. Annual housing investment is around 2 million TL. Housing requirements can be met under present conditions only by increasing housing investment by 70 per cent; but this would precent essential investments in other sectors. In other words, the development of the other sectors would be obstructed and resources would be badly used. Therefore investment in housing is taken as 20 per cent of total invesment. This proportion is higher than that for any other sector. By building utility housing 0-80 cent more dwelling units will be created than at present without increasing investment. These investments are shown in Table 346.

The calculation of the cost is based on 1960 prices. The investment to be made in utility housing consists of the credits granted by the Workers Insurance, Emlâk Kredi Bank (Real Estate Credit Bank) and similar government agencies ;housing expenditures to be made by the public sector; and resources used for the construction of squatter houses (gecekondu).

PROBLEMS AND MEASURES

a. Problems

Qualitatively and quantitatively, the present rate of housing construction is far from meeting requiremennts. The reasons are as follows :

(1) Inadequate research and analysis

(2) Lack of standards

(3) Absence of a well thought out land, construction rent and dwelling policy

(4) Channelling of the major part of investment to luxury dwelling units and absence of measures to prevent this.

If this situation is not corrected it will never be possible to meet requirements, the number of squatter houses in cities will increase, and a significant portion of family incomes will go to rentals. Moreover, the presence of luxury construction on one hand and squatter houses on the other hand will cause social disequilibrium.

With the volume investment to be made, it will not be possible to meet needs with current housing patterns. If investments are made to the extent necessary to satisfy needs, the already large volume of investment in housing will be further inflated and resources will be badly used. In any case, such a large share of resources cannot be devoted to this sector.

b. Measures

(1) Investments and Credits

(a) Housing investment will not exceed 20 per cent of total investment. Tax policy for private sector housing investment will be revised, and public resources and credits will be devoted to utility housing as outlined in the plan.

(b) Studies will be made to find the best type of utility housing and the cost thereof for each region, taking into account economic standards and health conditions.

(c) Public sector investment in housing will be of this type .All kinds of housing credits, tax exemptions and other assistance will be extended to this type of housing.

(d) No housing credits will be given for luxury construction and additional taxes will be livied.

(e) The housing code to be drafted will set forth the housing policy and ways of supervising its implementation. The necessary assistance will be given to improve the existing powers of municipalities in connection with the construction of utility housing.

(f) Assistance will be given to recipients of housing credits to assure acquisition of land.

(g) Priority will be given to those organized in housing cooperatives; and credit will be given to those constructing rental units according to social housing standards.

(h) Bad use of cheap credit to those building houses for their own occupancy will be prevented.

(2) Research

(a) The Ministry responsible for implementing housing policy will arrange for all kinds of research, including credit for utility housing.

(b) In order to make sound judgements on housing matters, more complete and reliable data must be obtained. Work connected with the housing census, housing requirements, housing standards, and building materials standards will be completed.

(c) Studies necessary for reliable information concerning the condition of squatter houses and villages will be made.

(3) Building Lots

(a) There is need for measures to prevent long delays in the utilization of lots on which construction was visualized in townplans. The lots should be taxed on their current values.

Attention will be given to taxing lots on the basis of increases in value realized in the course of real estate transactions. The owners of lots will share the cost of public services to be provided for their neighborhood in proportion to the current value of their lots.

(b) Municipalities will set aside land which they own and sell it conditonally to those building utility housing; transfer of the ownership of such lots will be prevented.

(c) More land will be put in the hands of municipalities in order to enable them to make regulatory sales as necessary.

(d) Town plans will be prepared for areas adjacent to the area covered by the municipal plans and will be supervised by the municipalities. Supervision by the Ministry of Reconstruction and Settlement of the application of town plans, and if necessary settlements outside of the town plan, will be assured. In construction attention will be given to ways of taking into consideration aesthetic aspects of the city.

(e) The most important problem concerning squatter houses is that they are built on other people's land. The problem of ownership of squatter houses located in areas selected for improvement will be solved in accordance with the targets of the plan, and the principles of protecting property rights and observing community interests.

(f) Since municipalities have limited resources it is necessary to establish a center to assist the municipalities in handling land matters.

(g) To enable municipalities and other local administrations to deal with land problems changes will be made in the codes now in effect. Most important, the duties assigned to the municipalities by Law No. 1580 in order to improve land matters will be incorporated in their basic duties, the regulations in Law No. 2490 concerned with rent will be changed, and Laws 6785, 7367 and 6188 will be brought up to date and applied.

(4) Squatter Houses (Gecekondu)

(a) Improvement of Existing Squatter Houses

(i) Squatter house areas will be mapped. Research will be undertaken to determine ownership of land, condition of public services, and which squatter houses are uninhabitable and where congestion in great.

(ii) Municipalities will create the most urgent public facilities such as water, sewage and roads; the participation of the owners of squatter houses in various ways and to a suitable extent will be encouraged.

(iii) Those which are uninhabitable will be destroyed after their occupants are provided with other housing, as outlined in paragraph (d) below.

TABLE 346 — Housing Investment

(Million TL.)

Years	Investment in village housing	Urban housing investments of private sector	Investments for utility housing in cities	Total investment for village and city housing	Number of normal housing units in cities	Number of utility units which can be constructed in cities	Total no. of urban housing units which can be constructed
1963	228.0	1 267.0	590.0	2 085.0	60 345	35 160	95 505
1964	230.0	1 409.0	590.0	2 229.0	67 741	35 160	102 900
1965	238.0	1 562.0	590.0	2 390.0	75 074	35 160	110 235
1966	242.0	1 727.0	625.0	2 594.0	83 640	37 250	120 890
1967	247.0	1 902.0	669.0	2 818.0	92 067	39 600	131 670

(iv) Credit or aid in the form of materials will be given to those that can be improved.

(b) Prevention of New Squatter House Construction

(i) Social and economic measures will be taken to bring urban migration and urban job opportunities into equilibrium.

(ii) In order to prevent squatter housing in cities cheap lots will be provided and the construction of owner-occupied or low rental utility housing will be increased.

(iii) The construction of houses by low-income citizens will be supported by help in the form of appropriate technical assistance and design to those who build their own houses.

(iv) Present codes concerning land and the construction of dwellings will be brought up to date.

(c) Investments considered in the five-year plan to eliminate squatter houses include the following.

(i) Appropriation of funds for research

(ii) Improvement of existing squatter houses

(iii) Material and technical assistance for the improvement of squatter houses

(iv) Construction of public facilities

(v) Construction of core housing by assuring lots and providing assistance to those who build their own houses.

TABLE 347 — Distribution of Squatter House Investments by Years

(Thousand TL.)

	1963	1964	1965	1966	1967
Research	3 409	3 009	3 009	3 009	3 009
Construction of public facilities	3 000	9 000	9 000	9 000	9 000
Technical and supply assistance	6 750	6 750	6 750	6 750	6 750
Provision of lots and improvement of existing units by assistance to those who build their own houses	30 600	30 600	30 600	30 600	30 600
Provision of new construction of squatter houses by assisting those who build their own houses in the pattern of utility housing	60 000	78 000	96 000	114 000	132 000
TOTAL	**103 759**	**127 359**	**145 359**	**163 359**	**181 359**
Number of squatter houses to be destroyed	3 600	3 600	3 600	3 600	3 600
Number of housing units to be built to prevent construction of new squatter housing	10 000	13 000	16 000	19 000	22 000

These investments and those given in Table 346 are components of utility housing investment.

(d) Low-cost housing can be constructed to prevent emergence of new squatter houses. Technical assistance, assurance of land, public facilities, assurance of credit and material assistance will be given to those who build their own houses.

(e) Establishment and cost of a system of assistance for villagers who build their own houses.

Because village houses are generally built by their owners and grouped together the system described below can be applied.

To improve village housing, those who build their own houses will be assisted. The principle of this system depends on the joint construction of technically suitable and cheap houses without sanitary drawbacks through assistance to those who live in poor dwellings and want to build their own houses. For this purpose use will be made of idle manpower and resources and the State will help to satisfy requirements which the community cannot meet. Government assistance will be used in such a manner as to encourage the establishment of cooperatives.

In general the system has four phases :

(1) Research

(2) Educational and implementational activities

(3) Assistance in the form of materials

(4) Credit assistance

TABLE 348 — Investment Assistance for those who build their own Houses in Villages (*)

(Thousand TL.)

	1963	1964	1965	1966	1967
Research	3 000	4 000	6 000	7 000	10 552 Map and aerial photographs in 1972 villages on the basis of 5 per cent sampling
Education	76	313	1 136	2 130	35 504 In 500 villages
Implementation	90	810	1 980	3 240	5 094 In 770 villages
Supply and Credit Assistance	75	6 750	16 500	27 000	42 450 In 623 villages
TOTAL	**3 241**	**11 873**	**25 616**	**39 370**	**61 646**

(*) Included in village housing investments shown in Table 346.

RENT

If the construction of dwellings continues as at present and importance is given to luxury housing the rent problem cannot be solved. Legal measures can assure only an apparent rent control. Actually the only solution to the rental problem lies in increased construction of low rental utility housing.

The main features of rent policy are :

a. To increase the construction of low rental utility housing by investments devoted to this purpose.

b. To take measures to restrict the contruction of luxury housing.

c. In the long run the rent problem will be largely solved by the realization of the housing objectives; in the meanwhile, so long as it will be necessary to handle this problem with regulations, a rent policy consistent with the housing objectives of the plan, which will protect the interests of tenants and landlords, will be applied.

(i) Standards for rent valuation will be revised, the same rent valuation standards will be applied to old and new housing, and the rental for new dwellings will be fixed and announced along with the occupancy permit.

(ii) The execution of written rental contracts will be assured and contracts will be supervised.

(iii) Except in the case of special need or clear social objectives the general rent standards will be applied to all housing facilities of the public sector which are offered for rent.

SECTION VII

MANPOWER, EMPLOYMENT, EDUCATION AND RESEARCH

1. BASIC PRINCIPLES AND METHODS

a. Basic Principles

The importance of education as a contributing factor to development efforts cannot be over-emphasized; development efforts are here defined as a striving towards a desired way of life. Through education, a new set of value judgements suitable for the desired way of life can be introduced, certain individual and group attitudes and behavior patterns that might help to direct society towards its goal of development can be cultivated and those attitudes believed to be detrimental to this end can be altered. The necessity of training an adequate number of personnel with qualifications suited to the requirements of development efforts is another point which underlines the importance of education. Furthermore, education is effective in increasing the creative ability and productivity of society and in realizing the principles of social justice and equality of opportunity for all members of society, thereby, enabling them to undergo the type of training best suited to their particular abilities. Education serves the very important function of helping people to gain an insight into the laws of the natural and social environment they live in, enabling them to asses the implications of their actions, and generally increasing their wealth and happiness.

In view of these points, priority is given in the Development Plan to raising the education level of society and to training people to suit the particular requirements and conditions of Turkish society.

The fact that the field of education - in addition to the important implications it carries as regards social aims - merits attention from the point of view of the training of the personnel required for the work to be done in order to realize development aims, makes it necessary to study the topic in the same context as employment. There is a close relationship between the total number of persons required in the various sectors and the distribution of this total among the functional categories, and the education system to be employed in training these people.

This close relationship between manpower, education and employment has consequently made it necessary that these topics be studied in the same context and in close connection with one another. The question of what should be the qualities of the various types of personnel comprising the total labour force must, therefore, be studied in this connection and the aims relating to the number of personnel to be trained in various education institutions and to the qualifications of this personnel must be so determined.

The following are the basic principles to be taken into consideration in the implementation of the education policy formulated in the Development Plan in accordance with the points mentioned above.

(1) The education system in Turkey will be reorganized to ensure the distribution of the various functions in the society according to the abilities of individuals. With this aim in view, those possessing certain abilities and talents will benefit from education facilities regardless of their social or economic status.

The prnciples of social justice and equality of opportunity will thus be realized while, on the other hand, the various services in society will be more efficient and effective as they will be carried out by the most capable and qualified persons in the field. All measures required to attain this objective have been envisaged in education programs. Where the demand for adminission exceeds the capacity (determined according to the need at the time of establishment) various selection methods of a competitive nature will be adopted.

An extensive scholarship program will be established in order to enable promising students with limited financial means to attend higher educational institutions.

The horizontal and vertical transitions within the educational system (i.e. the transfers from one school to another and the graduations) will be organized in such a way as to permit an accurate detection of the aptitudes and capabilities of individual students. Those who graduate from vocational training schools will be offered practical courses, and will thus be provided with the opportunity of acquiring practical experince in their respective fields before they continue on to institutions of higher learning.

(2) The system of education will be oriented towards training people to meet the specific needs and conditions of Turkish society. The importance given to technical education in the Education Plan is a clear indication of the fact. This fact will be taken into consideration in determining the basic principles of education.

To provide education opportunities for all children of school age within the next fifteen years is the goal in elementary education.

(3) In all educational institutions above primary level, those who benefit will be required to participate in education expenditures, within certain limits and insofar as they have the means to do so. Attention will be focused, at all levels of education, on introducing a vocational guidance system to make possible choice of vocation according to ability, as well as on successful application of an extensive scholarship system in order that those with a promising future but limited means may have the opportunity to go on to higher education. This principle will first be applied at the very highest level of education, and gradually spread down and branch off to include other possible levels and branches.

(4) The realization of the education objectives entails a very significant effort. In order that this may be brought about, necessary measures will be taken to make all possible use of public willingness to participate in investments in suitable fields

of education, and to meet the acute teacher shortage that exists at all levels of the educational system.

The aims of the plan as regards employment can be outlined as follows :

(a) To evolve an effective solution to the problem of unemployment.

(b) To raise the proficiency level of currently employed personnel.

(c) To employ qualified personnel in a way best suited to their qualifications, thus providing a means of social mobility based on an employment policy on proficiency at every level.

(d) To eliminate the imbalance in the distribution of the economically active population among various professional groups and to provide for a more balanced distribution.

b. Methodology

The appraisal of Turkey's labor force and estimation of needs in the coming years for various kinds of personnel were made within the following framework.

The situation of the labor force was studied under the major headings of agriculture, industry and services and under subsectors of industry such as construction, mining and manufacturing.

First, an inventory of the total labor force was made, determining the present situation in the various sectors. The total labor force was also classified according to occupational functions. Thus a classification consisting of seven groups and based on qualifications of and functions performed by various personnel was made and all professions placed in their proper groups.

After determining the present situation of the labor force, sectorial projections were made in a fifteen year perspective, and specifically for the five year plan period; the projections shed further light on the future functional distribution of the total labor force.

The bases for these projections were the coefficients of labor force production elasticity, calculated from the employment-production series of the past ten years. The projections were based on the production increases envisaged. The elasticity coefficients mentioned above were corrected for productivity increases due to envisaged technological developments, and for the structural changes which a planned economy will bring.

After the completion of projections for the total labor force working in the various sectors, functional projections of the labor force were made for each category. The principal factors taken into consideration in this connection were the discrepancies in the present-day distribution of the labor force and the prospects of corractions in the structure of the labor force according to the technical relationship which should exist between various professions and professional groups. Throughout the above study, the needs revealed by sector studies and project analyses were taken into consideration.

After the needs expected to arise in the various functional categories as a result of economic development were determined, the ways of meeting these needs were examined.

Educational institutions were considered as the major source of supply for the force. Various educational institutions were classified into 9 educational categories with the purpose of establishing a connection between these and the functional categories which are assumed to correspond to them.

Subsequently, the present capacities and conditions of various educational institutions were studied after which the capacity increases required for accomodating the desired number of students and the additional cost this would entail were calculated.

Any radical changes in the system of education being inconceivable in a short time, the education plan had to be prepared in a perspective of at least fifteen years.

In addition to educational institutions, the potentialities of training in industry, as another source of supply for the labor force, were studied and the possibility of developing better organized training in industry was examined.

2. PRESENT SITUATION OF LABOR FORCE

a. The total labor force in the three major sectors and subsectors of industry in 1961 is shown in Table 349 below.

Calculations for the year 1961 were made by classifying the labor force in these sectors into their respective functional categories according to the information from the 1955 census concerning the active population of 15 years and above, and from the 1 per cent sample results of the 1960 census. The results obtained were compared with those obtained from industrial records and other sources and the necessary corrections were made.

TABLE 349 — Active Population by Sector, 1961

(In Thousands)

Sectors	Active Population
Agriculture (*)	9 800
Industry	1 180
Services	1 157
TOTAL	12 850

(*) Active agricultural population does not include number of unemployed in peak working month.

TABLE 350 — Active Population in Industry by Sub-Sectors, 1961

(In Thousands)

Sub-Sectors	Active Population
Mining	70
Manufacturing	850
Construction	260
TOTAL	1 180

b. Functional Categories in Industry and Services

The functional distribution of total labor in industry and services is shown in Table 351. This distribution was estimated on the basis of the information given in the Table "Population of 15 and over by Occupation and Economic Activity", in 1955 census and on the basis of the 1 per cent sample results of the 1960 census. The results were checked against the results of enquiries by the State Planning Organization on the subject of on-the-job training, and on State Economic Enterprises, as well as against the studies of Sector Committees and the information given by various professional organizations; the necessary adjustments were then made.

c. Agricultural Sector

Studies on the agricultural sector are not based on functional categories, principally because the quality of the labor force in this sector is not homogeneous.

The present volume of the labor force in agriculture has, however, been estimated with a view to determining the surplus manpower supply in this sector or the difference between the total supply and the supply which would suffice to perform the various agricultural tasks of cultivation, etc. with current techniques.

TABLE 351 — Functional Breakdown in Sub-Sectors of Industry and in Services, 1961

(In Thousands)

Functional Categories	Mining	Manufacturing	Construction	Services	Total
Administrators and Enterpreneurs	1.0	8.2	1.3	60.5	71.0
Professional Personnel	0.6	4.2	5.2	61.0	71.0
Technicians	1.3	6.8	9.1	118.8	136.0
Lower Echelon and Sales Employees	3.3	20.2	6.8	479.7	510.0
Foremen	8.2	17.0	7.8	14.0	47.0
Skilled Workers	29.0	317.0	109.0	202.0	657.0
Unskilled Workers	26.6	476.6	120.8	634.0	1258.0
Total	70.0	850.0	260.0	1 570.0	2 750.0

TABLE 352 — Distribution of surplus or dispensable Population in Agriculture, by Months of peak and lowest activities

(In Thousands)

Years	July	January
1955	400	7 400
1960	800	8 300

Note : In July 1962 the disguised unemployed were estimated at 1 million.

TABLE 353 — Breakdown of Active Population by Sector

(In Millions)

Sectors	1962	1963	1964	1965	1966	1967	1972	1977
Agriculture	9.86	10.00	10.14	10.28	10.42	10.56	10.86	11.16
Industry	1.25	1.34	1.44	1.54	1.65	1.77	2.36	2.99
Services	1.63	1.78	1.94	2.12	2.31	2.52	3.64	5.05
TOTAL	12.74	13.12	13.52	13.94	14.38	14.85	16.86	19.20

TABLE 354 — Percentage Distribution of Active Population by Sector

(In Percentage)

	1962	1967	1972	1977
Agriculture	77.4	71.1	64.4	58.1
Industry	9.8	11.9	14.0	15.6
Services	12.8	17.0	21.6	26.3

TABLE 355 — Breakdown of Active Industrial Population by Sub-Sectors

(In Thousands)

Sub-Sector	1962	1963	1964	1965	1966	1967	1972	1977
Mining	70	74	78	81	85	89	110	131
Manufacturing	880	933	990	1 048	1 110	1 177	1 470	1 756
	330	333	372	411	455	504	780	1 103
TOTAL	1 250	1 340	1 440	1 540	1 650	1 770	2 360	2 990

TABLE 356 — Functional Distribution of Labor Force in Industry and Services
(In Thousands)

Functional Categories	1962	1963	1964	1965	1966	1967	1972	1977
Administrators and Entrepreneurs	73.0	77.0	81.0	88.0	97.0	106.0	141.0	194.0
Vocational Personnel (Total)	73.0	78.5	83.0	91.0	103.0	114.0	190.0	277.0
Engineers	12.0	13.0	14.0	15.0	16.0	17.0	32.0	56.0
Health Personnel ...	10.0	10.0	10.0	11.0	11.0	12.0	15.0	24.0
Teachers	22.0	24.5	27.0	20.0	39.0	47.0	85.0	106.0
Others	29.0	31.0	32.0	35.0	37.0	38.0	58.0	91.0
Tech. Personnel (Total)	142.0	151.5	165.0	177.0	194.0	213.0	348.0	570.0
Technicians	20.0	23.0	25.0	27.0	30.0	33.0	74.0	146.0
Aux. health person.	10.0	10.0	11.0	11.0	15.0	20.0	35.0	65.0
Teachers (Primary School)	50.0	54.5	59.0	63.0	67.0	71.0	106.0	154.0
Others	62.0	64.0	70.0	76.0	82.0	89.0	133.0	205.0
Lower Echelon and Sales Employees	530.0	580.0	635.0	695.0	765.0	840.0	1245.0	1720.0
Foremen	50.0	55.0	60.0	66.0	73.0	81.0	142.0	270.0
Skilled Workers	686.0	740.0	790.0	850.0	980.0	1000.0	1540.0	2570.0
Unskilled Workers ...	1326.0	1438.0	1562.0	1693.0	1810.0	1940.0	2384.0	2439.0
TOTAL	**2880.0**	**3120.0**	**3376.0**	**3660.0**	**3962.0**	**4294.0**	**5990.0**	**8040.0**

3. PROSPECTIVE DEVELOPMENTS IN THE VOLUME AND FUNCTIONAL CATEGORIES OF THE LABOR FORCE

a. Labor force projections by major sectors and industrial subsectors.

Estimated production increases and the labor force elasticity coefficient, based on production-employment series of previous years, were taken into account in calculating the total labor to be employed in industry and services in coming years. Employment in construction was calculated on the basis of investment targets, the estimated share of construction in investment and the labor coefficients in construction.

The labor force required in the agricultural sector was determined in the relevant sector studies (Tables 353 - 354)

b. Functional categories in industry and services

Functional categories in coming years were determined with reference to future requirements, the need for a more balanced distribution, and technical relationships between the various categories.

Functional categories which have greater influence on the realization of plan objectives were studied separately (Table 356).

The present distribution of the active population among the various functional categories is unbalanced in many cases. Engineer-technician, and highly trained-assistant health personnel ratios are so inadequate as to prevent proper utilization of highly trained personnel.

In determining targets in this connection, therefore, the additional requirements needed to redress these imbalances, and general minimum requirements were taken into consideration.

TABLE 357 — Situation of Education, 1961

(In Thousands)

Schools	School-age Population	Total No. of Students	% of School going children to school age Population	Number of Teachers	Teacher Student Ratio
Primary Education	4 513.0	3 160.0	70	67.9	46
Vocational and Technical Secondary Schools	1 786.0	68.4	4	8.0	14
Secondary Schools		333.0	19	5.2	64
Vocational and Technical Lycées	1 505.0	46.5	3	8.0	14
Lycées		86.0	6	2.5	34
Higher Technical Education	1 816.0	10.0	1	1.3	8
Higher General Education		51.0	3	2.8	19

4. PRESENT SITUATION IN EDUCATION

Teacher and student numbers and the ratio of students to school age population are given in Table 357.

Education in Turkey has always been considered a subject of great importance and expenditure in this field has been rather large. Various systems and methods of education have been tried. However, the fact that education has not been viewed in an overall and long-term perspective added to the lack of planning in organizing education, prevented full results from these expenditures and led to various imbalances in the education system. The imbalances may be summarized as follows :

a. Failure to establish a relationship between education and the needs arising from the particular structure and activities of the community led to important gaps in some fields and to surpluses in others.

b. The lack of consistent links between the various educational institutions, branches and levels resulted in deficiencies and gaps in horizontal and vertical transitions and in unbalanced capacities in the various levels of education.

c. The fact that the organization of education could not be adjusted to new developments caused imbalances in educational methods. The most important of these arises from the inadequate supply of teachers, and has led to a steady deterioration of teacher-student ratios. In many branches there are serious gaps as regards both the numbers, quality and vocational branch of teachers. Other problems are the lack of administrative personnel in education and of closer cooperation between educational institutions and the various ministries.

d. The lack of rapport between education and the prospective employment areas of the educated is another of the deficiencies in education today. The fact that many persons have to work outside their proper field of study or training is a major cause of waste in educational effort. This is mainly due to the lack of cooperation between educational institutions and establishments employing educated personnel.

e. The degree of success achieved by the various educational methods that have been tried to date and are being tried at present has not been evaluated. Consequently, the necessary data not being available, the steps to be taken have been and are being made "in the dark", on the basis of personal prefences. The resulting confusion and indecision have had highly deteriorating effetcs on education efforts.

f. Selection procedures in various branches of education are imperfectly correlated with ability, and many inequlities of opportunity exist in different regions, and income groups; the value of education as a factor encouraging social mobility to further the ends of social justice and social benefit has been highly impaired.

The scholarship system, which is the principal means of providing opportunities to highly gifted individuals with low incomes, has not been developed properly.

The improper participation of the beneficiaries of education in education expenditures has hindered both the granting of education opportunities to persons of inadequate means, and the raising of education expenditures to their potential levels.

5. EDUCATION TARGETS PROMOTING THE REALIZATION OF THE SOCIAL AND ECONOMIC OBJECTIVES OF DEVELOPMENT :

a. Educational Institutions

Educational institutions are regarded as the major means of training the various types of the labor force required. Calculations were made to determine the capacity in graduates, new entrants and teachers that will be required in addition to the present capacity.

The total number of students needed in the various branches of education for the realization of social objectives and for meeting the labor force requirements entailed by economic development is indicated in Table 358.

TABLE 358 — Number of Students in Various Education Branches

(In Thousands)

Branch	1962	1963	1964	1965	1966	1967	1972	1977	Index 1962 = 100 1967	1972	1977
Primary schools	3367	3567	3859	4141	4432	4736	5992	6821	141	178	202
Secondary schools	387	387	401	426	455	480	593	641	124	153	166
Lycées	86	96	96	97	102	107	168	204	112	195	237
Technical Schools at Lycée level	15	17	20	25	30	42	92	126	280	613	840
Vocational lycées (including teachers' training schools)	36	43	53	66	74	81	116	153	225	322	425
Advanced technical education	10	11	13	15	20	27	64	84	270	640	840
General advanced education	51	52	55	57	57	61	116	143	110	227	280

Note: On-the-job training and various courses are not included in this table. Information in this respect is given in the relevant sections.

TABLE 359 — Ratio of Population in the different Education Branches to School-age Population

(In Thousands)

Years	Primary Education			Secondary Education			Schools of Lycée level							Higher Education				
							Lycée			Vocational		Technical		Technical			General	
	School-age population (7-12)	Number of students	As % of school-age population	School-age population (13-15)	Number of students	As % of school-age population	School-age population (16-18)	Number of students	As % of school-age population	Number of students	As % of school-age population	Number of students	As % of school-age population	School-age population (19-22)	Number of students	As % of school-age population	Number of students	As % of school-age population
1963	4 480	3 567	73	1 985	387	19.1	1 675	96	5.7	43	2.6	17	1.0	1 880	11	0.6	52	2.7
1964	5 030	3 859	76	2 090	401	19.1	1 770	96	5.4	53	2.9	20	1.1	1 940	13	0.7	55	2.8
1965	5 150	4 141	80	2 200	427	19.0	1 870	97	5.2	66	3.5	25	1.3	2 040	15	0.7	57	2.7
1966	5 270	4 432	84	2 300	455	19.7	1 970	102	5.2	74	3.8	30	1.5	2 150	20	0.9	57	2.6
1967	5 390	4 736	87	2 390	480	20.0	2 075	107	5.2	81	3.9	42	1.9	2 275	27	1.2	61	2.7
1972	5 990	5 990	100	2 715	593	21.9	2 520	168	6.7	116	4.6	92	3.6	2 950	64	2.2	116	3.9
1977	6 820	6 820	100	3 000	641	20.1	2 800	204	7.3	153	5.5	126	4.5	3 450	84	2.4	143	4.1

Table 359 and 360 show, according to the targets determined in Table 358, the position in coming years with regard to the ratio of the school going population to the population of school age and the shares of vocational, technical and general education within the total at the different educational levels.

TABLE 360 — Breakdown of Lycée and higher level education into general, vocational and technical education

Years	Total Lycée Level Students ('000)	General %	Vocational %	Technical %	Total Higher Education Students ('000)	Technical %	Social and General %
1963	156	62	28	10	63	17	83
1964	169	58	31	11	68	19	81
1965	188	52	35	13	72	21	79
1966	206	49	37	14	77	26	74
1967	230	46	36	18	88	30	70
1972	376	46.	35	24	180	36	64
1977	483	42	32	26	227	37	63

b. Training in Industry

Economic development especially in the field of industry, necessitates the rapid training of large numbers of technical personnel and skilled workers. Due to financial and time barriers, training this personnel in schools is out of the question; consequently, efforts must be made to develop the process of training-in-industry more systematically.

The numbers of foremen and skilled workers to be trained in industry are given in Table 361.

TABLE 361 — Personnel to be Trained in Industry

Years	Foremen	Skilled Workers
1963	3 500	35 000
1964	3 500	35 000
1965	4 200	41 000
1966	4 900	48 000
1967	5 600	55 000
1968 — 1972	40 000	360 000
1973 — 1977	80 000	660 000

6. INVESTMENTS

a. Educational Institutions

Investments to meet the envisaged increases in student numbers in the various branches of education were calculated on a per student basis.

New investments and those for repair of existing buildings are shown in Table 362.

TABLE 362 — Investment in Education

(Million TL.)

Education Branches	1963	1964	1965	1966	1967	1963-1967 Total
Primary Education	260.0	320.0	307.0	333.0	355.0	1 575.0
Secondary Education	42.0	129.0	109.0	84.0	133.0	497.0
Lycées	36.0	28.0	28.0	56.0	36.0	184.0
Public Health Schools	27.0	30.0	30.0	15.0	5.0	107.0
Commercial Lycées	5.0	14.0	6.0	6.0	7.0	38.0
Agricultural Technical Schools	16.0	16.0	16.0	42.0	251.0	341.0
Men's Technical School at Lycée Level	40.0	39.0	36.0	63.0	99.0	277.0
Primary Teachers' Schools	65.0	30.0	89.0	26.0	18.0	228.0
Education Institutes	15.0	33.0	11.0	—	—	59.0
Technical Teacher Training Schools for Men	8.5	23.0	—	—	—	31.5
Higher Technical Education	36.0	36.0	73.0	86.0	106.0	337.0
Higher General Education	46.5	25.0	25.0	55.0	83.0	234.5
On-the-job Training	7.0	5.5	7.5	6.5	5.0	31.5
Research Institutes	7.0	22.0	22.0	24.0	24.0	99.0
Other Investments for Education (*)	49.0	32.5	35.5	39.5	31.0	187.5
TOTAL	**660.0**	**783.0**	**795.0**	**836.0**	**1 153.0**	**4 227.0**

(*) This includes renovation of Girls' Technical Education facilities and investments in : Girls Technical Teachers Schools, Teachers Schools for Itinerant Village Courses, Center for Education by Correspondance, Ministry of Education Printing Office, Religious Education, Libraries, Hostels and other Ministry of Education investments.

b. Training in Industry

(1) Vocational Training Centers

These centers will train assembly workers and foremen, with a view to raising the quality of the labor force in industrial units and various lines of production. Personnel with vocational and technical qualifications will be accepted first and trained as monitors and foremen.

According to the Vocational Training Centers Project, 114 units in various industrial branches will have started activities by 1967 and an increasing number of trainees will undergo six-months courses in these units. From 1968 onwards, 3300 persons will be trained annually in these centers.

The number of people to be trained in these centers, and initial outlays and operational expenditures for the first five years, are shown in Table 364.

(2) Training in Plants

The figures in Table 361 were determined on the assumption that the greater part of the personnel to be trained in industry would be trained through standard courses which could be opened in suitable factories and establishments. The total cost of these courses was estimated to amount to some 400 million TL.

TABLE 3.3 — Annual Foreign Currency Requirements in Various Educational Sectors

(Million TL.)

Years	Primary, Secondary Schools, Lycées & other Schools		Technical Schools at Lycée Level		Higher Technical Education		Higher General Education		Total		Grand Total
	Investment	Current Expenditure	Inv.	Cur. Exp.	Inv.	Cur. Exp.	Inv.	Cur. Exp.	Inv.	Cur. Exp.	
1963	6	3	20	—	7	4	14	5	47	12	59
1964	5	3	14	—	11	4	9	5	39	12	51
1965	4	3	20	—	16	5	8	6	48	14	62
1966	4	4	30	—	19	6	14	6	67	16	83
1967	4	4	30	—	21	8	14	7	69	19	88
TOTAL	23	17	114	—	74	27	59	29	270	73	343

7. PROBLEMS AND MEASURES

a. Employment and Unemployment

The high rate of population growth is accompanied by the rapid increase of the labor force. The discrepancy between the volume of employment created and the manpower supply leads to disguised unemployment in agriculture and open employment in the other sectors. Even in agriculture, disguised unemployment gives way to open employment beyond a certain saturation point. On the assumption that the rate of growth of the agricultural population will remain unchanged, unemployment in the next fifteen years is expected to be as shown in Table 365.

Table 365 shows clearly that, if special measures are not taken, the unemployment problem will not be fully solved. Unemployment may be varying degrees of disguised unemployment as in agriculture or open employment as in the other sectors. Disguised unemployment in agriculture leads to a large measure of auto-consumption within the sector and to the decline in per capita agricultural incomes. Auto-consumption in the sector also retards the passage to a money economy. Moreover, since the agricultural population consumes in fact sufficient foodstuffs, if it were to generate income outside the sector, there would be an increase in total production, without too great increase in the demand for foodstuffs. The solution would, therefore, be to raise the volume of employment outside the agricultural sector so as to absorb the surplus agricultural labor.

As will be seen from an examination of the table, however, the employment to be created in industry and services by a 7 per cent growth rate will not be sufficient

TABLE 364 — Personnel to be trained in Vocational Centers and related Investments

Years	Personnel to be trained (thousands)	Investments (thousand TL.)
1963	360	7 000
1964	945	5 500
1965	1 530	7 500
1966	2 190	6 500
1967	2 175	5 000
TOTAL	**7 740**	**31 500**

TABLE 365 — Employment and Unemployment Levels **(Million People)**

	1962	1963	1964	1965	1966	1967	1972	1977
15 - 64 age group	15.7	16.1	16.5	16.9	17.5	18.0	20.9	24.2
Labor Supply	14.2	14.4	14.7	15.0	15.3	15.7	17.6	19.9
Total volume of employment to be created	12.7	13.1	13.5	13.9	14.4	14.8	16.8	19.2
Unemployment	1.5	1.3	1.2	1.1	0.9	0.9	0.8	0.7

Note : The labor force supply is calculated acording to the estimated number of working people in the 15 - 64 age group. Students, soldiers, the sick and infirm, prison inmates, and housewives who do not work are excluded from these estimates.

to assure the desired distribution of manpower among the sectors. It must be realized, therefore, that unless special measures are taken, unemployment in agriculture will continue.

The discrepancy between the labor force supply in non-agricultural sectors due to rapid urbanization and the limited employment opportunities created in these sectors results in open unemployment. The economic and social costs of unbalanced urbanization are very high. The housing and other infrastructure investments which such rapid and unbalanced urbanization would require are highly in excess of resources. Open unemployment in cities may have detrimental effects on both society and individuals.

The different solutions to this problem are stated below :

(1) A large-scale increase of non-agricultural activities in rural areas with a view to the better utilization of rural labor and the prevention of excessive migration to cities.

This is one of the main objectives of the Community Development Program as outlined in the plan.

(2) Giving priority to employment-creating projects and sectors.

This point has been taken into account in the sector studies and in selecting criteria for project evaluation. Technological developments in industry, however, are usually of a labor-saving nature. In those sectors where there is international competition, the relationship between labor intensity and costs, and the need to keep to time and quality limits in certain technical operations restricts the scope of the employment to be created. Priority is given in the plan to projects and sectors where labor intensity results in the desired timing and quality of production, without affecting costs. The higher employment expected in services is based on the assumption that productivity in this sector will rise slowly.

(3) Consideration will be given to possibility of realizing labor intensive technological improvements in certain sectors, particularly in construction.

This matter is being considered in the context of the construction sector and it is estimated that the measures to be taken as a result of these studies will make it possible to increase employment in this sector.

(4) Another aspect of the employment policy is the export of surplus manpower to Western countries where manpower is short. Though Turkey has surplus manpower, it has also a shortage of skilled workers. If the excess manpower exported is of the skilled kind, this shortage will be more acute and measures must be taken to prevent this development.

(5) Long-term solutions will consist in applying a population policy which will tend to ensure that the population grows at a rate which makes it possible to achieve balance between the increase of the labor force and employment possibilities.

(6) If these measures do not assure a satisfactory solution of un-employment problems, It is envisaged to set a higher target rate of growth for the next plan periods

b. Technical Assistance

Technical assistance programs are prepared on an overall basis and take into account the requirements disclosed by the development plan. These programs are designed primarily to remedy the shortage of high level personnel in strategic areas and to ensure that personnel is trained rapidly in other important fields. The preparation of technical assistance programs was therefore closely coordinated with that of the plan and these programs laid stress on research and project preparation (which are required urgently in the first years of the plan) and in particular on training consultants and high level personnel for developing sectors.

These programs were prepared by a committee consisting of representatives of the Ministries of Finance and Foreign Affairs, through which the relevant contacts with foreign countries are made, and of the State Planning Organization. This committee has the task of preparing technical assistance programs to meet development requirements, after it has studied the needs of organizations in various sectors and the manpower and sector studies prepared for the plan.

A two-year program was prepared to meet initial requirements; this will be followed by a program for the remaining three years.

In the implementation of these programs, great importance will be attached to the choice of both the foreign experts who will be called in and the trainees sent to foreign countries, as well as to the supervision and appraisal of the work done.

c. Use of Personnel

In the use of the technical personnel employed by the State, care will be taken to ensure that each technician is working in his own field of specialization. The personnel policy followed will have the necessary flexibility to ensure that the staffs of different enterprises are employed at full capacity. In this connection, possibilities will be sought for utilizing where possible military personnel.

d. Education

Education establishments are the primary source of supply of the qualified personnel required for the implementation of the development plan. As indicated in previous sections, the labor force needed to attain the desired level of development in economic sectors in the plan period was estimated on the basis of certain technical relationships. In balancing manpower requirements against the capacity of education institutions in 1962, the orientation to be given to these institutions and the measures to be taken to insure the necessary increase in their capacity were seen. The most important point is that the standard of educational mechanism and organization should be such as to provide for the effective performance of education services.

(1) General problems and measures related to education

(a) Education policy

(i) In order to determine and implement the nation-wide principles and objectives of education in the light of the social economic and political choices of the State, close co-ordination will be ensured between the institutions engaged in organized and/or planned educational activities.

(ii) Methods of selection, based on ability, will be adopted to make education at all levels accessible to the most promising member of the community.

Efforts will be made to equalize the education and teaching levels of schools in various regions, with a view to ensuring equal education opportunities for all citizens. On the other hand, the possibility of opening institutions offering night courses at every level will be studied.

(iii) Scholarships at every level of education will be substantially increased in the plan period so that the able but needy can carry out their studies.

(iv) Various kinds of vocational schools will be incorporated into the structure of the Ministry of Education and administered in cooperation with the related ministries and departments. Ministries will continue to be responsible for education services in the fields where education cannot be dissociated from services (for example in agricultural and health training and National Defense education).

(b) Plan Objectives

The development of various branches of education will proceed in the directions indicated in the tables. A large part of the children of secondary school age will thus be directed towards technical and vocational education. To realize this a system of technical education which will cover all training from apprenticeship to foremanship and meet the requirements of existing industries must be established and duly applied.

The development of teachers' training institutions will be given priority and the number, size and subject matters of these institutions will be as shown in the plan.

These institutions must be set up within a system which complies with the needs and potentialities of the country.

According to the plan, the basic aim of secondary schools and lycees is to prepare students for higher education. Measures will therefore have to be taken to ensure that those who finish these preparatory schools can go on to higher education and be trained in the way that is most profitable for the nation.

(c) Investment Cost

The initial cost of investment and equipment in schools of various grades is very high. Priority will therefore be given to measures which make it possible to lower these costs.

Research in connection with the standardization of school buildings and the school types best suited to various regions and education levels will be undertaken by a board which will be emprowered to take decisions in this respect.

On the other hand, advantage will be taken, in cases where this is desirable and feasible, of the wish of the people to participate in the construction of schools.

All the necessary financial and legal measures will be taken to ensure that the construction of schools is completed (except in cases of material impossibility) in the space of a building season.

(d) Rate of Success

Rates of success are generally low in secondary schools, lycées and higher education.

The factors which tend to keep these rates at a low level in various educational institutions will be rapidly eliminated.

(e) Teacher-Student Ratios

The number of students per teacher is quite high. This is one of the principal reasons for low rates of success. One of the most important measures to be taken to overcome this deficiency, besides giving priority to teahers' training schools, is to seek to remove the financial and legal barriers which prevent those who have been trained as teachers from taking up their profession. Teaching will be made a more attractive profession. In this connection, it is envisaged to raise the allowance for supplementary teaching hours.

(f) School Programs

Surveys will be carried out to determine whether the students who leave schools of various levels have indeed been trained in accordance with the requirements of their respective careers. On the basis of findings, the necessary measures will be taken and the curriculum in the various establishments will be made to conform to modern technilogical standards and to conditions in the country.

(2) Specific problems in various branches of education and relevant measures.

(a) Primary Education

As some of the provisions of Law No. 222 on Primary Education, pertaining to objectives, methods and principles, are not conform to the financial, social and economic strucure of the country, they will be radically revised on the basis of the experience acquired in this respect.

(i) Project studies for primary schools will be made. Cost reducing measures such as region-wise standardization and the encouragement of voluntary participation in construction will be taken.

(ii) The population, social and economic structure, and cultural traditions and level of villages will be studied so that schools can be set up on a corresponding scale and teachers trained and prepared accordingly.

(iii) In order to reduce the very high teacher-student ratio possibilities will be sought, as from the first years of the plan of using deputy teachers as a temporary expedient. In the first two years, for example, lycée graduates and graduates of lycee-level establishments could be used for this purspose.

(b) Secondary Education

(i) Priority will be given to overcoming the teacher shortage. If necessary teachers may have to be supplied from sources other than the usual ones.

(c) Lycée Education

(i) Financial, administrative and social measures will be taken to meet the considerable shortage of teachers. The possibility of using university graduates for this purpose should be sought.

(ii) Measures will be taken to integrate lycées within the framework of optimum-size institutions, in order to ensure the full employment of teachers.

(d) Technical Schools at Lycée Level

The competence and responsibilities of technical school graduates at various levels should be legally assured. This is a basic condition for the higher standing of technical education.

(e) Higher Technical Teacher Training Schools

(i) Measures will be taken to attract graduates who have left the proffession back to teaching.

(ii) Graduates will be given professional status and remunerated according to their training.

(f) Higher Education

The curricula of health and agricultural schools will be determined, and cultural courses will be supervised, in cooperation with the Ministry of Education.

(i) Full utilization of the education period and facilities and of the teaching staff will be stressed. Immediate attention will be given to the problem of training teaching staff for higher education. It is necessary to adapt the content and methods of education to the objectives pursued and to provide training to fit the requirements of the fields of work where the graduates will be employed.

(ii) In addition to teaching, research will also take high priority. Publications which diffuse the results of research in various fields among those who will apply them or make them generally known should be issued on a much greater scale than at present.

(iii) Such factors as housing, nutrition and human relations which raise the quality of the work of the students must be improved in a short time.

(g) Agricultural Education

In view of the special position of the agricultural sector, extansion workers and the personnel necessary in other fields should be trained : by the Ministry of

Agriculture. Realization of the expected development in agriculture depends largely on training sufficient numbers of qualified personnel and educating the farmers. This latter aim is also pursued in the framework of the community development program. Agricultural education must, however be given special emphasis and the personnel who will teach agriculture must be trained especially for this purpose.

(h) Health Education

Primary and auxiliary level health personnel should be trained on-the-job (especially in hospitals). Consequently, health education should be in the hands of the Ministry of Health (except in the case of non-commissioned army health officers). Some of the schools belonging to the Ministry of Education may prepare students for health schools by offering elective courses.

(i) Girls' Technical Training

Since general vocational and technical schools of every level are open to all male and female students, girls' technical education should be directed toward the fields of education which are not covered by these schools. These are of two kinds. The first which is most prevalent in current technical schools for girls is training women as housewives. This must be intensified especially in backward areas where women do not have much opportunity for education and where girls' technical institutions can perform this function.

The second is to prepare women for professions adapted to their physical make-up. The programs, subjects of specialization and structure of technical schools for girls should be altered and developed in this direction. In doing this, the social economic and cultural structure of the country and its potentialities and requirements must be kept in mind.

(j) People's Education

People's education which has been given special importance in the development plan is considered in the section on Community Development.

(k) Libraries

Libraries are an inseparable part of education and the expenditure on this field had been considered together with other education expenditures. All the necessary measures will be taken to establish and run libraries in conformity with education goals and requirements.

(l) Fine arts will be encouraged, cultural exchanges between the West and Turkey will take place and teachers will be trained in plastic and literary arts.

(m) The State will establish prizes and awards in all branches of fine arts.

(n) The performances of the State Opera and theatres will be extended to a wider public, regional theatres will ve established and private theatres which make a valuable contribution to the education of the public will be encouraged.

(o) Religious education

The aim is to develop the activities of the Ministry of Religious Affairs so as to meet the requirements of the community now and in future, to train enlightened ministers of religion and to remunerate them on a scale consistent with their standing.

e. Training in Industry

(1) Present Situation

The results of a sample survey show that, although they are legally compulsory in plants employing more than 100 workers, on-the-job training courses are insufficient.

The main reason for this, besides the fact that the notion of training-in-industry has not gained sufficient ground with the managers or workers, is the high turnover in the labor force and physical and financial difficulties. Also, the Labor Law No. 3457 which makes on-the-job training courses compulsory is not fully enforced.

To attain the goals set for the 1963-67 period in training-in-industry, better organization and the following specific measures are needed :

(a) In view of the fact that training-in-industry is of great importance, measures should be taken to establish and develop this concept.

(b) The functions of skilled workers, foremen and technicians should be defined precisely and appropriate training methods should be worked out. Coordination between the Ministries of Industry and Labor and the trade-unions should be established in this respect.

(c) The qualifications of those who have completed training courses and studied in training centers should be specified in official certificates, and their wages set accordingly.

(d) On-the-job training courses in various branches of industry should be standardized throughout the country.

(e) The importance of skilled industrial work should be taught to the public and greater social vaule should be attached to these skills.

(f) In view of the scarcity of qualified monitors for the courses to be started in plants, monitor training programs will be given priority.

(g) The reasons for failure to apply Labor Law No. 3475 which makes training courses compulsory and is still in force will be investigated and the necessary measures of enforcement taken.

(2) Training-in-Industry program should be organized along two lines :

(a) Vocational Training Centers

Vocational training centers will be established to train monitors and foremen. These centers can be equipped with the material and machinery owned by the State but not presently in use.

(b) In-Service Training

In-service training courses should be opened in the most suitable plants in each branch of industry.

The programs of current on-the-job training courses held in compliance with the law should be studied and reorganized on more appropriate lines.

The various on-the-job training programs should be coordinated by the Ministry of Industry. Training in the different industrial sectors should be standardized throughout the country.

State Economic Enterprises are well designated for the training of personnel on a large scale. Courses should also be organized in cooperation with the private sector, so as to meet the requirements of the private sector.

(c) Training in the Army

The possibility of army training should also be considered as a source of supply of labor, particularly of skilled labor and foremen. Training in army shold be revised to yield better results.

RESEARCH

BASIC PRINCIPLES AND METHODS

Research, which is a creative effort of the human intellect, is given a place of importance in the Development Plan.

Research as a whole is an important factor underlying and speeding up development in social, economic, industrial and technical fields. It provides the most effective and rapid methods of solving the various problems of development in the different spheres.

Research is generally divided into basic and applied research. The fact that the former has an international character and that mutual assistance is possible has enabled developing countries to give priority to applied research. In the first five-year plan, research will be oriented towards practical fields.

In preparing the plan, the present stage of research activities in all fields was ascertained and the direction to be given to such efforts in the coming years determined.

The subject was examined in relation to higher education institutions in the public sector. It was not possible to obtain detailed information about reserch activities in the private sector.

An enquiry was undertaken in connection with the research activities of public institutions, the number of people engaged in research and expenditure on this item. As higher education institutions have the twofold purpose or education research, the funds spent by these institutions on research were determined on the basis of their global budgetary allocations.

Research pre-projects of various institutions were appraised in the light of the funds to be devoted to research in the five-year period.

Ways of promoting research in higher education institutions and in private and public establishments were examined and the appropriate measures determined.

PRESENT SITUATION

a. Research Personnel

(1) Public Sector

The information obtained by means of a questionnaire on the personnel of Ministries and State Economic Enterprises engaged in various fields of research and investigation work was classified in Table 366 according to fields of work and education levels.

TABLE 366 — Research Personnel in the Public Sector, 1961

Education Level	Technical	Agri- culture	Natural and Medical Sciences	Social Sciences	Total
Research personnel with higher education	277	662	138	173	1 250
Auxiliary personnel	332	200	30	102	664
TOTAL	**609**	**862**	**168**	**275**	**1 914**

(2) Higher Education Institutions

Members of the teaching staff in universities and higher education institutions, where research and teaching are the two separate goals, were assumed to devote part of their time to research. The number of research workers in these institutions can therefore be considered to be the same as that of the teaching staff, i.e. about 3,750.

b. Research Expenditures

(1) Public Sector

According to the results of the questionnaire, the expenditure of Ministries and State Economic Enterprises on research is as shown in Table 367.

TABLE 367 — Expenditure on Research in the Public Sector **(Million TL.)**

Sectors	Expenditures
Social Sciences	27.1
Agriculture	33.3
Public Works	11.8
Health	0.8
Mining and Electricity	46.0
Other	1.0
TOTAL	**120.0**

(2) Higher Education Institutions

The expenditure of higher education institutions on research was estimated on an overall basis from their budgets. It was taken to consist of part of the salaries of the teaching staff,and the funds set aside in the expenditures and budgets of institutes for research and studies and to amount to 59 million TL.

RESEARCH TARGETS AND EXPENDITURES

The orientation to be given to research in the five-year period was determined on the basis of preparatory studies and of the projects received from various institutions.

a. Research Personnel

(1) Public Sector

Needs in research personnel in the plan period were estimated in the light of the projects of various institutions, and are shown in Table 368, according to fields and education levels.

TABLE 368 — Requirements in Research Personnel, 1963 - 1967

Education Level	Technical	Agriculture	Natural & Medical sciences	Social sciences	Unspecified	Total
Research personnel with higher education	442	162	519	252	527	1 902
Auxiliary personnel	70	2	44	100	1 212	1 428
TOTAL	512	164	563	352	1 739	3 330

(2) Higher Education Institutions

The research personnel in higher education institutions is expected to increase together with the teaching staff of those institutions.

b. Research Expenditure

(1) Public Sector

Research expenditure as estimated on the basis of the projects received from the public sector falls into two groups: (1) expenditure which concerns sectors directly and is shown in the relevant sections and (2) that which is of a general kind and is included in this section.

TABLE 369 — Research Expenditure, 1963 - 1967

(Million TL.)

Fields of research	Expenditure
Science and Technology	17.0
Economic, social and administrative planning	225.6
Research expenditure included in sector programs	746.4
TOTAL	1 142.0

(2) Higher Education Institutions

Research expenditure in the higher education institutions for the plan period is estimated to amount to 310 million TL.

PROBLEMS RELATING TO RESEACH AND MEASURES

The measures to be taken in connection with the development of research fall into four groups.

(1) Creation of suitable environmental Conditions

The function and importance of research in Turkey has not been fully realized even by those who are most in need of research. The following measures will be taken in this respect :

(a) The distinction of scientist and research worker will be awarded only to the most competent.

(b) Research workers will be adequately remunerated.

(c) The findings and convictions of research workers will be held above all other concerns and preconceived ideas. Freedom of research will be enjoyed and this work will command respect.

(2) Organization of Research

A major problem is the absence of organized research and of a mechanism for coordinating and promoting research activities. Measures will be taken to establish cooperation in the different research studies to be undertaken in the field of technology and of social and positive sciences.

In order to organize basic and applied research in natural sciences and to coordinate and encourage these activities, a Scientific and Technical Research Council will be established. This Council will promote research activities which are expected to contribute to the realization of the plan targets.

In addition, a Social and Economic Research Institute will be set up which will be responsible for research in connection with long-term planning.

(3) Training of Personnel

The limited development of research activities is due to the fact that sufficient high-level personnel has not been trained in this field. Since this is a long-term process the training of personnel on a large scale will be started without delay.

It is accordingly proposed to arrange for the training abroad of as large numbers as possible of high-level personnel in all fields of research and to make full use in this connection of foreign grants and scholarships.

Auxiliary research personnel will be given scholarships to study under the best conditions in Turkey before they are eventually sent to complete their training abroad. In addition, with the purpose of training the number of teachers required for the realization of targets in the field of higher education, about 3 000 teachers will be selected to attend courses in foreign countries.

(4) Establishment and Equipment

(a) Establishment and equipment investments will be phased to proceed in step with the program for personnel training.

(b) Libraries in which both national and foreign scientific publications will be available will be established wthout delay.

(c) Publications on the latest scientific developments and records of seminars and international meetings will be circulated among those concerned as soon as they appear.

(d) Foreign scientific publications which will help to raise the level of research in Turkey will be translated.

SECTION VIII

REGIONAL PLANNING AND DEVELOPMENT

BASIC PRINCIPLES AND METHODS

The national development plan was based essentially on sector studies and surveys of various branches of activity. These studies, however, had to be supplemented by careful regional analysis. Regional planning serves to ensure development based on an inter-regional balance, the distribution of public services on lines designed to promote a more equitable income distribution, rational development of regions according to their potential resources and to find solutions to excessive urbanization and population problems.

In view of its complementary nature, regional planning will not only help to maximize the increase of national income, but will also promote its equitable distribution. In the preparation of the plan these two aspects of regional planning, as well as other principles cited in the "Plan Targets and Strategy" were taken into consideration and regional studies were fully utilized.

The five-year plan gives only the main lines of the policy for regional development and a brief account of targets and general principles of implementation. Detailed regional programs and projects will be included in annual plans.

a. Targets of Regional Policy

(1) To assure a better equilibrium between incomes, based on the distribution of the population in proportion to resources and economic activities by keeping in mind the principles of inter-regional development in the determination and geographical location of investments.

(2) To increase overall productivity by priority allocation of resources to regions with high social and economic potential.

(3) As stated in the "Plan Targets and Strategy" the aim of regional policy may be summarized as elimination of regional imbalances and acceleration of the development of backward regions.

b. The policy of regional development may be viewed from two angles :

(1) The type of regional policy which complements vertical sector studies dealing with resources and activities on a nation-wide scale by taking into account regional factors and targets in the geographical distribution of investments and services.

This approach bases the preparation of the national plan on sector studies. Parallel to sector studies, separate regional surveys are undertaken. In preparing sector programs and selecting particular projects, and in the allocation of investments expenditures, regional conditions are taken into account and the necessary revisions are made to conform to the economic and social targets of regional planning.

In the attainment of economic targets, important steps will be the selection and location of projects and determination of certain complementary infrastructure investments within the framework of an integrated settlement policy. This will make it possible to raise global productivity.

In the attainment of social targets, a policy tending to distribute income and services more equally between regions will be followed. This principle will be kept in mind in selection of projects (since projects located in different places may be a means of reducing excessive income disparities) and in particular in the regional distribution of services. Thus, at the different stages of sector studies and projects analyses in the preparation of the plan, regional factors will be taken into account.

With this method, income increases will be maximized and social targets reached with minimum sacrifice. The problem has been considered from this angle in the preparation of the plan.

(2) Another method is to base regional planning on detailed studies covering all regions. In this type of study, regional resources and the regional activities to be initiated are approached as a whole and implementation is carried out within this framework.

Here, however, due account must be taken of the fundamental relationship between national development plans and regional programs.

Planning requires that the resources of a community, with regard to their increase and utilization, be considered as a whole. In this respect, national and regional planners may use different standards in deciding how economic resources are to be spent and pursue conflicting goals, thus preventing coherent work. Hence, in their effect on the use of resources, regional plans should be considered as complementing the national plan and the postulates it contains. From this angle, regional planning can be integrated in national planning and is its inseparable component.

Regional analysis makes it possible to obtain fuller information on resources and problems, to consider the complementary aspects of investments and the possibility of secondary investments so that the national plan may be based on sounder foundations. Regional studies are also useful in the preparation of projects and programs which constitute the basis of the plan.

It must be pointed out that besides contributing to the preparation of the national plan, regional planning is important at the mplementation stage. In the implementation of plans and programs, cooperation at regional level between the various executive organs will help to achieve success. It is certain that the consideration of problems ot the regional level will bring important new elements into the implementation of the plan. The most important of these is rational land use on a regional scale.

Furthermore, one must bear in mind that regional implementation may also help to mobilize resources which cannot be taken into account at national level.

From the very beginning of the plan and together with sector studies, regional analyses were considered and utilized as fully as possible. Even though extensive and detailed regional planning can only be achieved in the long run after the necessary organizations are established and research is carried out, the studies undertaken so far have been useful in determining the direction and principles of long term development. Here, the main issue is to ensure coherence and unity between the regional and national plan.

c. For the present initial period, the problem was considered from three angles.

(1) Regions of Potential Development

Detailed inventory studies will be made for regions in this category, in which the same sector classifications and definitions as in the national plan will be used. The sectors which should be developed and show superiority according to the general principles of the plan will constitute the starting point of regional development work, and major projects will be prepared in these sectors. Thus, the drawback of considering regions as a self-sufficient units will be eliminated and their function in the whole economy will be given due weight.

After projects for leading regional sectors have been related to the requirements of the national plan, an extensive regional investment program which takes into account the plan targets will be prepared. At the plan preparation stage, complementary projects and secondary investment projects pertaining to regional development will be kept in mind and included in regional programs.

Social problems, administrative and other measures will also be investigated as it is important to coordinate the investments and various expenditures made by the different ministries, departments and institutions at regional level as well as at the center. It is obvious that this will be useful in the conclusions to be drawn from research, and in obtaining fruitful results from sector planning and implementation.

(2) Backward Regions

Regions which are economically and socially backward will be examined in the light of the same principles. However, in order to promote equality of benefit from government services, priority will be given to the distribution of these services to backward regions. A list of sectors which give hope for development in these regions will also be made; these sectors, will be so selected as to avoid undully high costs and since costs will be within defined limits, least sacrifice of productivity will be made.

(3) Metropolitan areas

Studies of metropolitan areas, which have social, economic and physical problems originating from excess concentration of population and economic activity, are another aspect of regional policy. Means must be found to provide a more balanced distribution of population and economic activities by establishing new centers around these regions.

In the studies relating to large industrial projects or establishment of industrial complexes, the effect of the proposed investments on the region, the possibility that they may annul the desired results, and of making additional secondary investments should also be considered.

Since it is not possible to separate these aspects of implementation in regional planning, more than one of them will be considered for any one region. This is one of the factors which makes regional planning a many-sided policy.

PRESENT SITUATION

Studies carried out and those being carried out :

a. Centralized studies

Regional planning is a new subject in Turkey and in the world. Hence, as a first step in this initial period, efforts were made to develop the theoretical framework, benefit from the experimental studies carried out in some regions, and make use of the qualified personnel in this field.

The most important of the studies at the center are the indexing studies made with the help of data showing economic and social conditions in regions. Investments and the distribution of services in regions will be made according to an order of priority based on the indexing of provinces by volume of economic activity, level of social services, state of transport and communications and municipal services. Provinces were thus rated according to a national average, after grouping provinces by geographical regions according to their indices ,regions were listed in the order of importance of their economic and social levels.

As stated under social targets, the aim pursued in the plan with regard to the distribution of public services is that the different groups and regions benefit equally from these services. In order to attain this aim, the order in which regions have been listed will be taken into account in the distribution of health, education and other services. The economic and social rating disclosed by regional studies will also be taken into account in the geographic distribution of projected investments. Both these points will be considered in greater detail in the preparation of annual programs.

b. Regional studies

(1) Regional studies were first carried out for Eastern and South Eastern Anatolia, which are backward regions and therefore given high priority. These were undertaken at the center with the help of experienced local personnel and results were constantly compared with the situation in the regions.

The same methods and criteria will be used in areas outside these regions.

Other measures concerning the development of backward regions are also being considered.

Meanwhile an administrative board will be set up to supervise the implementation of programs in backward regions and to assure cooperation.

To assure efficiency in government services, a personnel policy will be adopted which will make it possible to send qualified personnel in adequate numbers to backward regions and offer premiums to officers in these regions.

The results of all these studies will be given in the annual programs in the form of detailed programs, drafts and policies.

The Keban barrage project, which is also important for the enhancement of the mining resources in that region, will be started as soon as possible. This project will meet certain major requirements of the economy but will also contribute considerably to the development of the Eastern and South Eastern region.

(2) The Antalya region is considered as a potential development area. Under the agreement concluded between the Turkish Government and the Special Fund of the United Nations, the area was selected as one of the Mediterranean projects. FAO experts and experts of the State Planinng Organization cooperate in the implementation of the project which is a pre-investment regional survey conducted within the framework of the national plan.

The inventory studies carried out in the Antalya region have been completed and the development potentialities and other findings they revealed were taken into account in the sector studies made on a national scale.

(3) The object of the Eastern Marmara regional planning studies is primarily to solve the social and economic problems of the metropolitan area of İstanbul, to establish new development centers and to reduce the pressure of excessive urbanization and centralization.

(4) Zonguldak was selected as the object of the fourth study as it is a region where a large industrial project has been carried out. Measures will have to be taken from now on to deal with the problems which will arise out of the implementation of a large scale investment project. The problems which the second iron and steel industry to be established at Ereğli will create, are also studied from a regional angle.

Regional studies made to date are primarily pilot studies. From now on the number of regions studied will be increased and regional planning will be more detailed.

ORGANIZATION, PROBLEMS AND MEASURES

Studies on regional development and planning require qualified personnel and organizations at both central and regional level. The ultimate aim is to prepare, by establishing in the general plan and to set up the necessary inmplementing agencies.

To promote the development of backward regions, the private sector will be encouraged to increase its activities in these regions by means of tax concessions.

In the regional studies to be undertaken as preparation for the plan, national resources and the ways in which they may best be utilized will be considered in an overall framework. Sector analyses and regional studies will thus be conceived as the complementary elements and tools of the same planning process.

In the implementation phase, and especially in planning the pattern of land use, work at regional level must be on a coordinated basis. Regional planning should make it possible to apply the decisions taken in the national plan (which themselves take into account regional data) in the way best suited to land use planning, and to use regional resources in a way which will contribute to the attainment of plan targets.

Both regional studies and regional planning as defined above, can only yields results in the long run because of the lack of qualified personnel and the need to collect detailed data.

Programs have been started for training research personnel and establishing research teams for regional planning.

Before they are applied, the various regional plans will be harmonized so as to avoid waste and any future conflict of competence that may arise.

SECTION IX

IMPLEMENTATION POLICY

FUNDEMENTALS OF THE IMPLEMENTATION POLICY

The political measures which will give shape to an economic structure permiting sucessful implementation of the plan are studied in two separate chapters. The basic adjustments to be made in institutions which form the social, economic and administrative structure of society are discussed in the chapter dealing with problems of implementation. In this present chapter, the main lines of the policy which will orient economic activity in the short run are outlined.

The State will follow the development of the economy closely and will use the means at its disposal to make the necessary adjustments in economic variables within the framework of a consistent and flexible economic policy so as to arrive at an equilibrium between available resources and the necessities of the plan.

The details of the implementation policy will be stated in the annual programs. Measures and recommandations in connection with the different plan sections are formulated in the relevant sections. Here, only measures and recommandations concerning the macro-economic values affecting all the sectors of the economy are given. The measures and recommandations discussed in previous chapters will be considered within the general framework of the implementation policy.

The basis of the implementation policy are : (1) establishment of equilibrium between macro-economic values as required by the plan targets, and (2) the adopiton of special measures to supplement the allocating function of the price mechanism.

In a developing economy it is indispensable to establish a dynamic general equilibrium consistent with a high development rate. This means that consumption expenditures must be kept within certain limits defined by the increasing volume of investments and that surplus manpower as well as the real savings potential due to unutilized production capacity must be mobilized. Measures to this effect will be taken. Other measures will concern the distribution of resources among expenditures. Except for those budgetary expenditures where the basic decision is not one of price, the price mechanism will regulate the allocation of resources to various expenditure fields. However, for the price mechanism to perform this function, regulatory measures will be taken : while avoiding as far as possible direct controls in the necessary adjustments to be made to ensure that scarce resources and incomes are allocated in accordance with the economic and social aims of the plan, it will be necessary to have recourse to measures relating to tax and credit policies, the establishment and development of a capital market, and the definition of a foreign trade regime.

The implementation policy described above is within the normal regulatory functions of the central administrations of all democratic countries. The bases of this policy were determined within the framework of a plan embracing the whole economy. Consequently, the various measures and decisions are the mutually complementary parts of an integrated implementation policy. Since an effective implementation policy must be consistent, due regard has been given to the functional interrelationships between economic values and to the impact of the various measures to be taken on the different variables.

A tax policy which maximizes savings will at the same time assure the best allocation of resources, will not be a disincentive to enterprise and will reflect social justice principles in the distribution of income. In determining price policy, incomes costs and price relationships were taken into account.

Another important consideration in the determination of implementation policy is the instability and inconsistency seen in execution as a result of uncoordinated decisions. In order to remedy this situation, which in many cases hampers the most suitable distribution of resources by restricting the action of the market, general regulatory measures which will merely provide a framework for the price mechanism and not impede its functioning will be resorted to as far as possible rather than specific controls and decisions applying to individual cases which are difficult to enforce effectively and impose great burdens on the administration. Inappropriate interventions which are likely to disrupt the equilibrium of the market will be avoided and the few indispensable interventions, such as determination of import programs, will be on a rational basis.

The laws and regulations now governing intra-sectoral and intersectoral relationships lack consistency and fail to complement each other. This situation cannot be rectified as a whole in the short term, but the basic policies determined for the different sectors and subsectors in the plan period were designed to avoid conflicting trends within and between sectors; the decisions presently in force will further be revised with the framework of these policies.

Besides taking measures to regulate the whole economy, the State will also, by planning its own expenditure adequately and assuring the consistent operation of its various organs, assume a determinant part in the realization of the plan targets.

FINANCING OF THE PLAN

INTRODUCTION

The principles outlined below will govern the financing of the plan.

a. Non-inflationary Financing

Investments will be financed from real savings and deficit financing will not be resorted to during the plan period. There will be equality between annual savings and annual investments.

b. Physical Equilibrium in Financing

The volume and pattern of savings was determined in the light of the physical resources required for the realization of the proposed investments. Consideration was further given to the action to be taken in order to prevent the emergence of bottlenecks due to the likely demand for these physical resources over the plan period. Requirements in foreign capital goods were estimated with particular care.

c. Monetary Equilibrium between total Volume of Savings and Financing Needs.

The plan stipulates that a yearly average of 1[illegible]3 per cent of GNP must be devoted to investments. This was held to be possible by increasing public investments from 9.7 per cent of GNP in 1962 to 11.4 per cent in 1967. Due to structural factors, this increase is expected to be gradual. Current public expenditures in the plan period are estimated to average some 15.8 per cent of GNP.

In order to finance public investment and current public expenditures, the share of the public sector in national income will rise from 24.74 per cent in 1962 to 26.36 per cent in 1963 and to 27.47 per cent in 1967.

The rising share of public expenditures in GNP will be met by the increase of budgetary taxes from 14 percent of GNP in 1962 to 17.3 per cent in 1967. Other public revenues were also estimated to increase at the same pace as GNP. However, this distinction between tax and other public revenue is made to simplify economic analysis. What is essential for the plan is to obtain the total necessary public revenue. Consequently this will be considered a basic principle in the implementation of the plan. In actual fact, the distribution of government revenue may not conform exactly to the percentages arrived at in macro-balances which are in general based on estimates.

According to the macro-balances, private investment which is estimated to amount to 6.6 per cent of GNP in 1962, will rise to 6.7 per cent in 1963 and reach

8 percent in 1967. Private savings are accordingly expected to increase at the same rate as private investments.

In order to realize the expected increase in public revenue, the present system of public revenue will be reformed. In order to increase private savings, incentive measures will be taken.

1. Reforms in the public revenue system will be designed to meet the public financing needs of the plan.

(a) Public revenue will have the necessary flexibility to assure the revenue increases needed for the success of development efforts.

(b) In its general economic and social effects, the public revenue system should not be such as to create inequality between sectors and individuals wilth respect to their contributions to the cost of public services, but should be such as to further the attainment of the aims of the plan.

(c) The public revenue system will contribute to increasing global savings and initiative.

2. Voluntary savings will increase if there is a greater propensity to save. To this end, measures designed to encourage savings and production will be taken during the plan period.

a. A clear, stable and non-inflationary policy will be followed in order to create confidence in the economic and political order.

b. In import programs, luxury items will not be included in the liberalization list and as small an amount as possible will be included in quotas.

c. Suitable tax rates will be imposed on luxury items, whether manufactured in the country or imported.

d. Postal savings will be instituted.

e. Measures will be taken to help the formation of a capital market, the primary purpose of which is to facilitate the channeling of savings to the most productive areas. In this way, the lower income groups, who do not save for lack of of opportunity to enchance their savings, will be encouraged to do so. Institutions operating on the capital market will be encouraged to give consideration to such measures as the issue of stocks with assured dividends or guarantee of profit, which will tend to channel savings to the capital market.

REFORM OF PUBLIC REVENUES

a. Tax Revenues in the General Budget

The attainment of the economic and social aims of the plan depends on correcting certain defects in the present tax system and on the smooth functioning of the system as a whole.

The tax revenues in the general budget occupy the most important place in the financing of public expenditures. Therefore, parallel to the growth of the financing needs of the plan, it is necessary to increase these revenues. This increase will be obtained partly from the regular growth of revenues in an expanding economy and partly from improvements in the tax system. The first step should be to bring the tax structure to such a condition that it can generate revenues at . the required level. The average tax burden (the share in GNP of total tax revenue in the general budget) in 1961 was 13.3 per cent. Other budgetary revenues and revenues of local administrations are excluded from this calculation. To meet the financing needs of the plan, this share must be 16 per cent at the beginning of the plan period and increase to 17.3 per cent by 1967.

A more important factor than the share of taxes in GNP is the distribution of this burden among economic sectors and individuals. A tax system in which the tax burden is equitably distributed can readily levy heavier taxes without straining tax payers. Conversely, in a tax system with a lower burden but with an inequitable distribution between sectors and individuals, revenue can be collected only with adverse effects on the economic and social structure of the country. The second principle of tax reform will therefore be to find a system for gradually redistributing the tax burden in a manner best suited to the economic and social structure of the country.

The third principle is that the tax system should tend to increase individual initiative and raise total savings in the community. The basic principles which will govern the reform of the tax system are summarized below :

(1) The tax system must have the necessary elasticity to ensure the increase in tax revenues needed for the success of the development plan and its shortcomings in this connection must be remedied. Among the measures to be taken to support economic development, it is intended to tax those sources which have so far not been taxed or have been undertaxed. These taxes must be determined in accordance with the overall requirements of the economy and the structural characteristics of the resources to be taxed.

(2) In its economic and social effects, the tax system will not create inequality among sectors and individuals with respect to their share in the cost of public services, and will further the realization of the aims of the plan.

(3) Tax exceptions, exemptions and allowances on income from certain sources, and deficiencies in supervision lead to discrimination against income from wages and salaries. Due regard will be given to measures designed to remedy these defects.

(4) The tax system will tend to increase initiative and the total volume of savings. The application of the above-mentioned principles will ensure the equitable distribution of the tax burden and make possible an increase in the level of public and private savings.

In order to minimize the adverse effects of increasing public savings on private savings and investment, and stimulate effort, the following measures will also be taken :

(a) Accelerated depreciation will be adopted in income tax.

(b) Investment allowance will be applied so as to encourage savings and channel investments into the desired fields. More favourable conditions will be applied to investments in specified fields in certain less developed regions.

(c) By imposing consumption taxes on luxury goods, the propensity to save will be encouraged at the expense of the propensity to consume luxury goods.

(d) The new principles incorporated in the agricultural income tax, the application of which has been postponed, will aim at increasing productivity in agriculture and providing work incentives for farmers.

(e) Production tax and other duties on industrial goods will be refunded with the object of promoting industrial development and exports of manufactured products. The present regime of temporary imports will be revised in accordance with this objective.

b. Other Public Revenues

According to the macro model, other public revenues will increase at the same rate as GNP or about 7.3 per annum. These revenues did not increase in line with GNP in the 1950-1960 period but will have the necessary elasticity after the realization of reforms on the above lines.

(1) Local Administration Revenues

Owing to the rapid population increase and the flow from villages, cities and towns are growing at an increasingly faster rate. As a result, the volume of services performed by local administrations also needs to be expanded. However, as their financial resources do not increase at the same rate, the services of local administrations are becoming increasingly more inadequate. Consequently, the capacity of some local administrations to perform services depends on the ability to meet their steadily increasing requirements for transfers from the general budget. In many cases where it has not been possible to provide sufficient transfers, a number of local government services are presently inadequate. In order to remedy this, the financial structure of local administrations will be strengthened and the possibilities for self-financing will be explored.

However, in some underdeveloped regions, it is impossible for local administrations to finance the services they have to perform with the revenues collected in these regions. In these cases sufficient transfers from general budget revenues to local administration budgets will be secured to attain the minimum standard of public service needed in every region.

In order to strengthen the financial structure of local administrations, the following measures will be taken :

(a) Revision of the Building Tax

Increase of population and of urbanization has produced a large real increase in the value of buildings in addition to the increase attributable to the effect of inflation on housing values. From the social justice and from the economic point of view, it is essential that the owners of these buildings participate on a larger scale in the cost of local administation services.

Today the assessment of the building tax is determined according to the values of buildings at the time of their initial registration. To the extent that the inequalities arising from rent control can be eliminated, assesment of the building tax will in future be based on the current letting value and taxes will thus be levied on the actual revenue from the building. For the purpose a general revaluation will be made as soon as possible. The prevention of luxury building and the encouragement in its stead of utility housing and of hotel construction to further tourism are other goals of the plan. To achieve this, the current tax exemption granted to new buildings will only be applied to contruction serving social or tourism purposes.

(b) Revision of Taxes on Urban Land.

Today, vacant plots in cities are taxed on the basis of their initial registration value. They will be taxed henceforth according to their current value. Thus the unneccessary spread of cities which causes an increase in the volume of municipal services and is due to speculative transactions will be countered.

(c) Revision of other local Administration Revenues

Other taxes, fees, duties and fines, collected by municipalities or specific provincial administrations will be reviewed and those which have not kept pace with current prices increases will be revalued.

(2) Annexed Budget Taxes

Annexed budget agencies meet the larger part of their expenditure from general budget funds. The services performed by these agencies are generally classified in two groups : (a) those which benefit the whole community and (b) those which benefit specific groups. In many cases, the fees charged by these agencies in return for the services performed directly for individuals are very low. These fees will be increased to the extent consistent with principles of social justice.

(3) Income from State Properties, Funds to be Generated by State Economic Enterprises and other Revenues

Revenue from State property will be reviewed and re-adjusted on the basis of the modifications to be made in the Lease Act. At the same time, the necessary reorganization of the Directorate of Foundations (Vakıf) will be undertaken.

After their reorganization and the adoption of new price and tariff policies, State Economic Enterprises will be able to generate more funds than presently. In their present condition, these enterprises are expected to be able to generate over the plan period funds in excess of the initial estimate of 4.9 billon TL. These funds will thus serve to meet the greater part of the amount shown in the macro-model under "funds from unidentified sources". The rest will be met from the increased revenue of annexed budget agencies and, if necessary, from domestic loans.

IMPLEMENTATION OF THE PLAN IN THE STATE SECTOR

LONG-TERM PLAN AND ANNUAL PROGRAMS

Prior determination of the implementation details of long-term policy decisions in economic and social fields may lead to future complications. By failing to take into account the fact the plan will exert certain effects, which though unpredictable at the stage of preparation will be revealed during implementation, the plan may - if irreversible decisions have been taken - prove to be inapplicable in later years. For the successfull implementation of the plan it is therefore important to determine precisely the areas in which final long-term decisions are needed and those in which decisions are for the short run. All the basic long-term decisions which orient the growth of the economy in the desired direction must be taken without any omissions and there must be consistency between them. On the other hand, there must be enough flexibility to be able to take into account, when necessary, the action of uncontrollable factors.

A distinction has therefore been made between long and short-term plans. The rules governing the preparation and implementation of the plan and the framing of economic policy were defined in the light of the above considerations. Accordingly, targets will be reached through the implementation of annual programs prepared within the framework of the plan.

The long-term plan and annual programs will be attuned to the continuing nature of economic and social life. At the same time it will be possible, at periodic intervals, to take into acount such factors as weather conditions, conditions on foreign markets, catastrophes, and availability of exceptional funds.

a. Conformity of Annual Programs with the long-term Plan

Annual programs will give scope for modifying initial working assumptions, revising incorrect estimates and making such other changes in the plan as may be necessary in the face of new conditions. They will also indicate in detail the manner in which work will be executed in that year. Annual programs will be prepared every year in a new perspective and attention will be concentrated mainly (within the basic framework of the long-term plan) on the revenue estimates and expenditure targets for the year concerned. Annual programs will be prepared so as to secure balanced yearly efforts which do not impair the integrity of the long-term plan.

b. Preparation of Annual Programs

Annual programs will be prepared by the organization responsible for preparing the long-term plan. They will be completed ahead of the budget and work programs, so that the latter can be prepared in conformity with the annual plans and be instrumental in the attainment of the long-term plan targets.

c. Coverage of Annual Programs

In the initial plan period, annual programs will not only indicate the work to be undertaken that year, but will also mention long-term measures to be taken for the realization of the plan. In the first plan years, research in connection with the projects to be undertaken in future years will have an important place. As implementation progresses, evaluation of results will gain importance and programs will be prepared in the light of results obtained heretofore. Annual programs will give detailed information on revenue and expenditure, and monetary and credit policies. The programs will also include the projects to be undertaken in various fields in order to realize investment targets, the foreign trade position for the year, and the regional distribution of expenditures and projects. The projects to be undertaken in that year by the government and State Economic Enterprises will be covered and an attempt will be made to assess trends for private investments. The time-schedule for the adoption of legal and administrative measures will also be given. Before taking some of these measures, extensive research may have to be carried out. In such cases, the stages of reseach will be indicated, and once research is concluded, steps leading to the adoption of the proposed measures will be stated.

NATIONAL BUDGET AND WORK PROGRAMS OF STATE ECONOMIC ENTERPRISES

Public investments will be financed from the general budget, (drawn up in conformity with annual programs) and from the funds set aside for their annual work programs by State Economic Enterprises. While the budget is being prepared, Ministries and annexed budget agencies will make requests for funds in accordance with the targets set in the annual programs. The requests from Ministries will be grouped according to the requisites of the plan; thus the public services performed that year will be conform to the objectives of the long-term plan. The preparation of the work programs of State Economic Enterprises, will have to be followed closely by the management of the Enterprises to ensure conformity with annual plans.

The speed with which public investments, whether financed from the budget or by State Economic Entarpries, can be carried out depends on the state of preparations in the technical, legal and administrative fields.

PROJECTS

a. Preparation of Projects

The main principle is to use domestic material and equipment in investments. This will be duly observed in the preparation and implementation of projects. Annual programs will be prepared on a sound basis and investments will be realized rapidly if projects based on exhaustive studies are available. In the areas and sectors which are to be developed according to the long-term plan, project preparation should therefore be undertaken immediately by the responsible agencies. Resources will be allocated according to the projects prepared and to the priorities recognized in the annual program. Keeping in mind their adverse effects on the economy, steps will be taken to prevent the waste of manpower and capital, and the delays entailed by unsufficient preparation.

b. Selection of Project Locations

The location of facilities and investments will be based on economic considerations. Social considerations will influence the selection of location only insofar as this involves minimum sacrifice from economic standards.

Department or enterprise directors will not be affected by external considerations in selecting location but only by the requisites of the annual program. Measures will be taken to eliminate the factors that slow down the execution of projects, whether carried out by the departments themselves or by contractors. The actual cost of the project will be compared with initial estimates and the reasons for any divergence will be investigated.

CONSISTENCY IN IMPLEMENTATION

As in the long-term plan, so in implementation, harmony and consistency will be sought between the different policies followed. The consistency assured in the plan between saving, expenditure, production and foreign trade policies will be maintained in course of implementation. Policy decisions affecting social and economic life will be harmonized.

FOLLOW-UP OF IMPLEMENTATION

Economic conditions will be followed closely to note any change as soons as it occurs. The results of these surveys will be evaluated, and the degree of success in implementation determined. In order to have sound information on the changes in the economy, it is essential to follow activities in both the public and private sectors. In the latter case, information will be sought from professional organizations. Quarterly reports on the progress of annual programs will be received from the public agencies concerned and appraised.

Should these reports show the need for special measures to be taken within the year, it will be possible to adopt early solutions. Coordination and harmony in the implementation of plans by the services, agencies and administrations concerned will be maintained in accordance with the provisions of the law establishing planning. Coordination committees composed of senior responsible officials will meet whenever necessary to discuss matters and work out solutions in common.

GUIDANCE FOR THE PRIVATE SECTOR

INTRODUCTION

In the realization of the five-year plan targets, considerable efforts are expected of the private sector. During this period, not only must the existing private establishments work at full capacity, but private investments must be on a large scale to contribute to the intended increase of overall productive capacity. To attain the plan targets, private investments must rise from their estimated level of 3.5 billion TL. in 1962 to 5.9 billion TL. in 1967. Private investment should therefore increase from 6.6 per cent of GNP to 8 per cent in that period. This represents an average annual rate of increase of 11 per cent as against 10.6 per cent for public investments over the same period.

Next to this increase, the pattern of private investments should also be modified to correspond to the plan targets. Measures to reduce the rate of investment in luxury housing, and maintain the rate of increase of housing investment within definite limits are included in the plan. Private housing investment will therefore occupy a less important place than was hitherto the case within total private investment. An increasingly larger share of private investment will be channelled to more productive fields. The private sector is expected to re-orient its activities with a view to effecting this change in its investment pattern.

Establishing the economic order and environmental conditions which will bring about the intended structural change and increase in private investment will largely be possible through implementation and adoption of the measures shown in the plan. Embracing as it does information and decisions on the long-term orientation of economic growth, expected developments in the various branches of activity, the general policy measures to be adopted by the government and investment activities, the plan facilitates to a large measure the performance of the enterpreneurial functions of the private sector, by making it easier to estimate future demand and the situation of markets and to take decisions with regard to investments. The stability to be maintained in the plan period will also exert a favorable influence. In addition, non-inflationary planned development, based on a tax system under which the various sectors will be taxed in proportion to their level of development, will assure higher savings and their flow to the most productive fields, thus increasing the resources available to the private sector for investment in the expected areas. It is indeed observed that the private sector expands its activities in all democratic countries where plans are applied.

The existance of favorable environmental conditions is not sufficient by itself to ensure the growth of the private sector. It must be kept in mind that a basic factor of success is the quality and organizational ability of entrepreneurs and managers in this sector. Organization means establishing prosperous enterprises based on rational and productive working methods. Added to this, there is also the need for entrepreneurs operating in the same field to study and discuss common problems and work together in seeking solutions. In such an environment, the private sector will be able to take advantage of the means afforted to mobilize its potential and use its capacity more fully. The private sector should consider Turkey's needs and problems in all phases of its activities and assume its responsibilities accordingly, so that it may play an important role in the successful implementation of the development plan.

With the exclusion of a few enterprises using modern production techniques and operating in accordance with business management principles, the private sector consists of small and scattered enterprises with insufficient technical and managerial knowledge and limited financial resources. The private sector will achieve the targets assigned to in the plan only if it is able to carry out far-reaching changes in its structure, attitude and organization. The government has the important task of leadership in this regard.

The problems of the private sector and the measures to be in this connection are as follows :

a. Organization

Organization should be considered under two aspects :

(1) organization of enterprises according to modern management methods, and (2) establishment of cooperation (such as may yield quick and fruitful results) between the private sector and the professional organizations, research institutes and similar agencies which provide information and guidance to enterprises.

The large number of small scale, scattered and uneconomic private enterprises existing today leads to considerable waste of capital and manpower which is detrimental both to the economy as a whole and to entrepreneurs themselves. To modify this corporations should be formed and producer and sales cooperatives established in small industry and agriculture. These steps will be legally and financially supported by the government. While effecting the above-mentioned structural changes and engaging in new investments, the private sector must give utmost importance to technological and managerial skill and specialization. Consulting firms must be established to carry out research in connection with investment possibilities, to prepare and evaluate specific investment projects, and in general help entrepreneurs to establish and operate their plants. Furthermore, investment banks have to be organized so as to prepare pre-projects and projects and provide technical and financial assistance.

It is also essential that the Chambers of Commerce and Industry and the Union of these Chambers perform more efficiently their taks of conducting enquiries on and proposing solutions to problems in the various branches of activity of their members, of giving the required information to prospective foreign or domestic investors, and of providing training facilities. On the other hand, government agencies must provide the Union with systematic and continuous information on developmens in the different sectors and on the new measures to be taken.

Another outstanding issue in the private sector is the unfair and harmful competition alleged to be waged against private enterprise by the State Economic Enterprises. As indicated in the section on the rules of the mixed economy, the activities of the State Economic Enterprises will be conducted, save in some exceptional cases, on the same lines as those of an efficient enterprise. By making a distinction between the decisions taken in its entrepreneurial capacity and those safeguarding the public interest, the government will ensure that the private and public sectors are essentially subject to equal conditions.

b. Lack of information

As a result or inadequate market intelligence services, the private sector lacks information on market and economic conditions. In order to remedy this and assist entrepreneus, the exchange of information through professional publications, and such activities as fairs and exhibitions must be developed. Further, professional groups must prepare periodical reports and catalogues of the goods produced in their respective sectors which will be distributed to other sectors through the Union of Chambers. Lastly, in addition to their function of representing their members, the Chambers of Industry and Commerce should strive to serve as a meeting-place for the exchange of views and information between these members.

c. Personnel and Training

Requirements in technical, administrative and managerial personnel were indicated in the relevant section. Besides this, however, certain functions must be assumed by the private sector in respect of the training and, in particular, the employment of personnel.

There is a particularly severe shortage in domestic enterprises of technical superintendents, foremen, industrial engineers and managers, and in foreign trade activities, of accountants and marketing experts. In order to eliminate this shortage, not only will technical education be stressed, but schools for training higher-level managers and business administrators must also be developed, and if possible new ones set up in certain centers. In large and medium scale enterprises, on-the-job training must be provided. Private enterprise should further contribute to the efforts in this field by establishing training and providing scholarships. As in Western countries, professional organizations and the Unions of Chambers should arrange courses, seminars and conferences on managerial and technical subjects, and project analysis in industry.

d. Financing

(1) Attainment of the proposed level of private investment depends largely on the ability to mobilize private savings to the extent required. Investments will be based on the one hand, on self financing possibilities and the savings to be obtained from the capital market, and sustained on the other hand by the credit funds of various banks and credit institutions.

The investments to be made directly by the private sector will be realized if actual and potential private savings flow into investments in productive fields. These investible funds will be sustained by the savings to be created as a result of restricting consumption. It will be possible to channel these funds into investments by means of such measures as the establishment of a capital market, development banks and long and medium term credit consortiums.

In order to promote the shift of investments from unproductive to the desired productive fields, investments in productive fields will be stimulated, those in luxury housing will be surbed by tax measures, speculative profits arising from real estate transactions will be taxed more effectively and the purposes and targets of the plan will be widely publicized.

(2) One of the most important institutions for directing savings towards investments in advanced countries is the capital market. A capital market that makes it possible for forward looking entrepreneurs to use accumulated small savings must be established as soon as possible. Both with this purpose and that of ensuring that private enterprise operates and develops on more rational lines, the formation of joint-stock companies will be encouraged, a certified public accounting system will be set up and the commercial code and tax system will be reviewed and revised so as to establish an operative and expanding capital market.

(3) Private industry has encountered difficulties in obtaining long-term investment credits and medium-term credits in the past and has met these requirements largely through short-term commercial credits. With the object of preventing this practice which freezes short-term credits and can give rise to uneconomic enterprises, and of assuring the necessary credit, it will be necessary to establish investment banks providing long-term capital loans and a consortium of banks which will make its possible for existing banks to provide medium-term working capital loans. The establishment of these institutions will stimulate project preparation and planning ahead and will consequently facilitate to a considerable extent the channeling of savins from unproductive to productive fields. In addition, the credit resources of the People's Bank (Halk Bankası), the People's Fund (Halk Sandığı) and the guarantee cooperatives established for the purpose of providing credit to small scale enterprises will be increased.

(4) Another basic factor in the attainment of the targets set for the private sector in the plan is the provision of agricultural credit. The purchase of chemical fertilizers, improved seeds, tractors, agricultural machines and equipment, and other output-increasing means of production will be largely financed by credits. Existing agricultural credit facilities are not on a scale to ensure the development visualised in the plan. Therefore, it is necessary to determine a credit policy in this respect and to provide additional credit resources. The credit to be given by the Agricultural Bank to farmers should be for production purposes only and its scale and nature determined on the basis of productivity criteria. Moreover, the use of the credits given should be closely supervised by the Agricultural Bank acting in cooperation with the Ministry of Agriculture.

(5) In order to assure self-financing in private establishments and at the same time, channel savings to productive investments, accelerated depreciation will be adopted and measures will be taken to timulate savings and direct them to investments in specific fields.

INCENTIVE MEASURES

Both the publication of the five-year plan and the measures mentioned above in relation to organization, information, personnel and financing will encourage the private sector to invest in the desired fields. Furthermore, tax concessions will be granted to investments in the less developed regions and the flow of investment to regions with unexploited development potential will be encouraged. In centers with abundant potentialities, industrial districts will be established. In these regions, the government will give priority to necessary infrastructure investments.

In addition, newly established industries will enjoy selective tariff protection, but this protection, being for development purposes, will be gradually abolished. In order to encourage exports, the production tax and other similar taxes imposed on export goods will be refunded and the importation on a temporary basis of any imported raw materials entering in their composition will be facilitated. Moreover, means will be sought to make it easier for exporting firms to establish offices abroad and send samples.

Other measures designed to encourage enterprise are : care in the registration and protection of patent rights and simplification of the related formalities; definition of standards in industry and agriculture; and assurance of the functioning of certifying organizations.

The targets set for the private sector in the plan will also be easier to attain if foreign investment is encouraged. The present law on the encouragement of foreign capital creates the favorable legal framework as it grants foreign investors the right to engage in the same fields of activities as Turkish corporations, provides sound gurantees concerning payment and transfer in case of expropriation and natioalization, and establishes confidence with regard to the transfer of profits and freedom from unfair competition.

Legal measures are not, however, sufficient by themselves to encourage the inflow of foreign capital. The private sector on the one hand must increase its contacts with the outside world so as to attract foreign capital and the government on the other hand must take the necessary measures to eliminate administrative difficulties arising in connection with the entry of foreign capital. The present official agency concerned with foreign capital will be reorganized and the new set-up will be composed of persons who are able to devote full time to this work and are under the direction of a single authority. This organization will be able appraise proposals from a technical and economical standpoint and will engage in the necessary activities in foreign countries to elicit new offers. This will consist on the one hand, in informing foreign investors of pre-investment surveys in productive fields and, on the other hand, in maintaining liasion with international organizations suporting private investment. In order to attract capital to Turkey, full use will be made of Turkey's representatives abroad. This organization will also advise foreign enterpreneurs on administrative matters and follow the activities of foreign capital in Turkey.

PRICE POLICY

Price relationships will be of utmost importance in the attainment of the social and economic targets of the plan since prices influence consumers' preferences and the decisions of entrepreneurs with regard to the goods they will produce, the methods and factors of production they will use and the amounts of income they will devote to these factors. However, there is a reciprocal and not merely unilateral relationship between production and prices. The pattern and factors of production may change with prices but they may also change indeperdently of prices and thus in turn affect prices. The market which is the common medium in which prices are reflected, determines the total volume of the goods and services to be produced, the distribution of productive resources among the various branches of production and, as a result of this, the distribution of income. Prices, however, are not always reliable measures of preferences and costs. In some cases there may be divergences between individual prefences and the basic prefences of the community as a whole. Due to institutional factors, the market may not cleary reflect real preferences and costs, particularly in the long run, or the pattern of production may not be that which will meet the pattern or demand indicated by the market because of the scarcity of productive resources, especially of capital and enthepreneurial efforts. The following measures, designed to overcome as far as possible these deficiencies, will be taken to compelment the price mechanism.

MEASURES RELATED TO PRODUCTION AND IMPORTS

As the plan was prepared on the basis of physical balances, there should be no significant increase in the general level of prices or such changes in relative prices as are contrary to the targets in the five-year period, if expenditure and production develop on the lines shown in the plan. Only in the case of imported goods may prices increase as a result of changes in world prices.

In the branches of activity for which it is responsible, the public sector will realize the targets set for it in the plan. For the private sector, however, the plan is only a guide. By giving reliable estimates on the long-term trends of final and intermediate demand however, the plan helps entrepreneurs to make sounder investment decisions. In this respect it has the function of complementing the mechanism of the market. In fields where the private sector predominates, the pattern of production will nevertheless depend on the decisions of entrepreneurs. The pattern of production which will result from these decisions may consequently differ from the production targets determined in the plan on the basis of economic considerations. Another possibility is that there may be unforeseable changes in the pattern of demand

For instance, if the private sector invests above the target level in the plan, this will raise the demand for capital goods.

In general, it will be left to the mechanism of demand and supply to regulate such short and long-term price changes. But changes in relative prices affect the output of other goods and income distribution in proportion to the importance of the goods concerned for the economy. Upward or downward movements in the prices of certain basic commodities moreover, may produce inflationary or deflationary pressures affecting the whole of the economy. For this reason measures will be taken at production level to prevent notable price increases particularly in capital and consumer goods from endangering the achievement of the economic and social targets of the plan.

In an under-developed country where capital goods are short, prices show a steadily rising trend, whereas it is necessary to keep the prices of these goods fairly stable in order to attain the target rate of growth. As the production of basic capital goods such as iron and cement in Turkey is mainly in the hands of the State, production capacity in these goods will be expanded so as to meet demand. The import component of investments, on the other hand, has been carefully calculated. The foreign resources that will be forthcoming and the internal production capacity to be established should therefore be sufficient to meet the additional demand for capital goods that may result from private investments exceeding target levels.

If the output of certain basic commodities produced by the private sector which are necessary for balanced development is not sufficient to meet demand, the gap will be bridged by imports in the short run while in the longer run the investment program of the government will be reviewed so as to restore equilibrium. Funds will have to be appropriated to meet such additional import requirements.

In the attainment of the plan targets, a rise in the price of wage goods is at least as harmful as a rise in the price of basic goods as it means a decline in the real incomes of the more vulnerable groups and could even lead to generalized inflation. The possibility of employing idle labor at appropriate wage rates depends to a large extent on the availability of cheap and aboundant wage goods.

The private sector dominates in such wage-goods producing sectors as agriculture foodstuffs, textiles and housing. Stress was laid on the basic investments designed to increase productivity and production in these fields. In order that production may rise in step with demand, particularly demand for the essential agricultural products, the necessary basic investments will be speeded up, institutional reforms will be made and administrative measures taken in the relevant sectors. If necessary, imports will be resorted to in order to reduce the effect on supply of fluctuations resulting from atmospheric conditions.

As a general principle, the prices of agricultural products will be supported by subsidizing the elements entering into production costs. However, until a system of supporting farm prices which is satisfactory for producers is established by means of the above method or by the setting-up and development of sales cooperatives, subsidies will be granted under exceptional conditions to certain products. These subsidies will be met from the budget and given through cooperatives and unions for the exclusive of their members.

Capacity in the private and public sectors was estimated to be sufficient to meet the demand for cheap clothing.

Measures for channeling resources to utility housing are shown in the section on housing.

MEASURES TO REGULATE THE MARKET

Price policy consists essentially of measures to increase competitiveness, fluidity and responsiveness in the market. Inadequate communications between scattered production units and consumption centers have led to the development of intermediaries. These intermediaries who also meet the working capital needs of small enterprises are able to buy at low prices from the latter by taking advantage of their economic weakness and of the lack of organization and make large profits by establishing sales monopolies in consumption centers. This situation which is due to the concentration of essentially scarce capital, of knowledge and organization in a few hands gives rise to wide regional price differences, pushes prices far above costs and enables intermediaries to realize at the expense of producers and consumers monopolistic profits which exceed greatly the value of the services they perform.

The solution of this problem lies in the improvement of the economic power of small producers and in their joining efforts to establish marketing organizations. Organizations supplying the working capital needs of small scale enterprises will be developed and the setting-up of sales cooperatives by these enterprises will be encouraged. The Meat and Fish Organization (Et ve Balık Kurumu) and other government agencies will discharge their functions of regulating prices in a more dynamic way so as to prevent falls in producer prices and rises in consumer prices.

As there are only few enterprises (or in some cases only one) engaged in certain lines of production in which advanced technology and a high volume of investment are required, conditions of full competition cannot be assured. In such cases of actual or semi-monopoly, entrepreneurs are able to raise their prices far above costs to maximize profits. When these price rises affect important commodities, the government will intervene by applying corrective controls or resorting to imports.

A similar situation arises in the case of certain consumer goods for which demand is high and imports limited by foreign exchange availabilities. As foreign exchange is allocated in priority to imports of investment goods and raw materials, the demand for certain consumer goods cannot be met fully. In the conditions of monopoly created by import quotas, the pressure of excess demand makes it possible to raise sale prices and to realize large profit margins. Tax measures will be adopted in such cases to transfer excessive profits to the Treasury.

PRICE CONTROLS

As indicated in the relevant sections of the plan, price relationships will be determined by the equilibrium in physical goods and the general measures to be taken to regulate the market.

Direct price interventions will only be made when the market does not adequately reflect consumer preferences and economic costs.

Intervention which does not take into account real costs will be avoided because the effect of such intervation on economic activities is harmful and the balance between total output and expenditure is disturbed. Past experience has shown that when the price ceilings enforced to curb rising prices did not cover production costs private enterprise suspended operations or a black market arose. In both cases the result was misallocation of resources, and bottlenecks in the market.

Price ceilings for products of State Economic Enterprises have just as harmful results but a different kind. When prices are fixed below costs, this raises the profits of the producer groups using those goods, and subsidizes certain consumer groups. Any fixation resulting in income transfers can only be accepted if it is consonant with development goals. Prices must be determined on the basis of production costs. This will ensure that State Enterprises compete with private enterprises under equal conditions, control their costs more closely and become profit-making rather than debt-incurring concerns. It would also end haphazard transfers of income from the tax payers who would be meeting the losses of these enterprises to certain specific groups.

In the branches of activity where private and public enterprises operate together, prices will be set by the market. If the State enterprise is in a monopoly position, the prices will be fixed so as to meet costs fully, including depreciation, and to create surpluses for working capital needs and additional investments.

Subsidies will be applied only in certain cases. If the goverment decides to protect certain consumer groups for social reasons, its motives for so doing and the costs involved will be clearly stated and the resulting deficit will be covered from the budget.

It may be necessary for economic reasons and in the public interest to grant temporary subsidies to newly established enterprises. This may be the case in particular if a market does not yet exist which will permit new enterprises producing goods of major importance for economic development to work at full capacity. In such cases, the sale price can be fixed below costs for a certain period in order to stimulate consumption and to create a market.

The control of prices in the private sector will be directed at preventing the prices of certain important commodities from rising sharply in the short run owing to the fact that resources are not sufficiently developed to establish physical equilibrium or that, although physical equilibrium is established, a monopolistic or semi-monopolistic position has arisen.

On the other hand, the relative prices of goods of prime necessity and luxury goods may be readjusted by means of customs duties and consumption taxes so as to induce a better distribution of internal and external resources between these goods. Taxes and other measures will be applied in cases where it may be necessary, in order to stimulate exports, to create a difference between the internal and external price of certain commodities.

CREDIT POLICY

Credit policy is of primary importance in the attainment of the targets assigned to the private and public sectors in the plan. The realization of the investments targets set for the private sector will depend, on one hand, on auto-financing and the saving to be obtained from the capital market and will be sustained on the other hand by credits from commercial banks and other banking and credit institutions. Public enterprises will secure the working capital and investment credits they need urgently from the special funds to be appropriated. In order to establish a credit mechanism which will be instrumental to the achievement of targets, the distribution of credit, with regard to the amount of the different types allocated, must be that best suited to the economy.

The credit policy of the first five-year plan has therefore been conceived to ensure optimum allocation of credits in the national economy.

1. A non - inflationary credit policy will be followed

In sound economic development, it is normal and necessary that the money in circulation and the volume of credit should expand on lines parallel to those of the growth of production and national income. The rate at which the money in circulation and volume of credit increase is however of vital significance. This increase should not, by running at a level considerably higher than that of production and national income, attain a rate which may produce inflation. Measures to establish this critical equilibrium will be taken all through the plan perriod and credit policy will not be allowed to become inflationary.

2. Optimum allocation of credits within the economy will be secured.

The following measures will be taken in order to realize the optimum and most productive allocation of credits in the country and to find solutions to the existing shortage of working capital. These measures will be defined in more detail in the annual programs.

a. The policy to be applied as regards interest rates will be adjusted to the needs of a developing economy.

(1) Interest rates on the various kinds of credit will be as close as possible to the economic interest rate. To achieve this, official restrictions on interest rates should be gradually relaxed as the economy develops during the plan period and finally abolished.

(2) In principle, the rate of interest charged on similar types of credits will be the same in all branches of activity.

(3) Fees, commissions etc. received by banks in addition to interest, will be incorporated in interest rates and borrowers will know the exact rate of interest that has to be paid.

(4) Efforts will be made to reduce the difference between interest paid on deposits and interest on loans by curtailing the administrative expenses of credit institutions.

b. The different types of credits provided for different purposes will be adequate to meet the requirements of the economy.

In order to provide short, medium and long-term credits to meet the different requirements of a developing economy, new credit institutions will be established or existing institutions reorganized.

(1) Short-Term Credits

In general, short-term credits are due in three months and used in financing delivery of goods from the producer to the consumer. Short-term credits are provided by commercial banks. In order to grant sufficient amounts of these credits, the liquidity of bank funds must be maintained. Between 1950-1960, the insufficiency of institutions providing other kinds of credits led to the indirect allocation of part of the funds of commercial banks as medium and long-term credit. Consequenly, an important part of commercial credit, about 18.5 per cent, is now in the form of frozen receivables. The necessary measures will be taken to make these funds liquid. In addition, institutions providing medium and long-term credit will be established during the plan period and the recurrence of the 1950-1960 practise prevented. On the other hand, in order to expand the volume of commercial credits, measures will be taken to increase deposits by revising in particular the lottery system of banks.

(2) Medium-Term Credits

In principle, medium-term credits are due in one year and meet the working capital needs of such sectors as industry, agriculture and tourism.

In Turkey, the nature of and methods applying to medium-term credits are still not well defined. Medium-term credits needs were met until now by extending the maturity of short-term credits. This was not only insufficient to meet medium-term credit needs, but also reduced the liqudity of resources available for short-term credit.

In order to meet the urgent needs of State Economic Enterprises for medium-term credit, a "State Investment Bank" will be established, which will pool the funds of these enterprises and administer them centrally. In addition, an institution will be set up with the participation of banks to meet the medium-term credit needs of the private sector. This consortium, which will provide medium-term working capital to the private sector, will also relieve commercial banks of the burden of supplying credit which is not part of their customary financing.

(3) Long-Term Credits

Long-Term credits meet the need for investment credits. In developed countries, the source of investment credits is the capital market. In underdeveloped countries this source is almost entirely lacking and the longterm investment credit needed by enterprises is provided by development banks.

The purpose of development banks is to supply the investment credit which is lacking in various sectors of the economy and especially to direct the resources at their disposal to the most appropriate investment fields. The Industrial Development Bank provides long-term investment credit to the industrial sector only. There is no other development bank to provide investment credit to other sectors. Other sectors have endeavored to meet their long-term needs with short-term credits. This situation has been detrimental for the economy and the enterprises concerned.

As enterprises are administered in different ways in the different sectors, specialization in a given sector would increase the productivity of development banks. For this reason, extension of credit by the Industrial Development Bank to other sectors has not been considered. The investment credit needs of these sectors will be supplied by the development banks to be established : a Mining Bank will be set up and the Tourism Bank will be reorganized and provided with sufficient resources to meet needs in this sector.

Agricultural investment credits, should also be developed. The need for long-term agricultural credits has been met up to now by the short-term credits extended by the Agricultural Bank; most of these credits are now in the from of frozen uncollectable receivables as inadequate criteria were used in their allocation.

It is essential that the extension of long-term credit, and in this context of that of the Agricultural Bank, should be based on appropriate criteria.

The resources of the Agricultural Bank consist mainly of deposits. Under these circumstances, it is impossible for the bank to provide long-term investment credits at low interest rates and its resources should accordingly be enlarged. The complex credit regulations governing the financing of public enterprises will be abolished and a "State Investment Bank" will be established to extend investment credit to these enterprises.

All the surplus investible resources of public enterprises will be pooled and placed under the control of a single authority. Allocations from this fund to the enterprises will be made according to specific investment criteria. Public enterprises will not secure investment credits from other sources.

One important problem in this connection is to train the necessary high-level personnel. Measures to this effect will be taken.

INCOME DISTRIBUTION POLICY

A redistributive financial policy will be followed in order to bring about an income distribution which is more conform to principles of social justice. On the one hand, the necessary fiscal measures will be taken to distribute the tax burden more equitably between economic sectors and individuals, and on the other hand public services will be expanded and distributed on a more equal basis. The living standards of those whose share in income distribution is small will be raised and they and their children will be given more opportunities to overcome social barriers and accede to higher income levels.

The main goal of economic development is to secure an equitable distribution of income at a level which is higher than that enjoyed by the masses today. The policy to be followed will be such as to reconcile overall structural considerations with those of equitable income distribution. The measures to be taken should therefore be designed to secure additional resources for economic development and higher income-levels, and should tend at the same time to redistribute income. For this reason both economic expenditures and expenditures and investments for social services should be raised above their previous levels in the pre-plan period. To attain this, consumption expenditures must be reduced so that the shares of both private savings and public revenue in the national income can be raised above those of the previous period. As stated above, the burden to be born by economic sectors and individuals in raising public revenue will be shared on a basis of equality. In the meanwhile, the per capita tax burden will increase as an unavoidable consequence of economic development. However as public revenue will be spent, on the one hand, on economic investments designed to accelerate the growth of national income and on the other hand on extending education health street lighting, and drinking water facilities to a greater number of people, this will mean higher living standards for those who will benefit from these services. In other words, in spite of the increased tax burden the average rate of increase of consumption per head which stood at 2.9 per cent at constant prices for the 1950-1960 period and 2.1 per cent in 1955-60 will rise to 2.4 per cent in the plan period. In short, per capita consumption will rise in absolute terms and the increase in social services will both compensate for the increased tax burden and prepare conditions conductive to a much higher average standards of living in the future. It will be possible to benefit fully from the 2.4 per cent increase in per capita consumption as the prices of basic goods will be kept stable by measures to prevent inflation.

As indicated in the section on social targets, the income distrubition policy to be followed will assure the equitable distribution of the tax burden and of social services betwsen citiziens. The first step to be taken to assure equal distribution of the tax burden is to maintain the right equilibrium between the tax contributions to be made by the different economic sectors.

The second aspect of income distribution policy is to provide equality of benefit from social services. The measures set forth in detail in the relevant plan sections were elaborated so as to ensure the distribution of public services between individuals and regions on the basis of equality of benefit.

Application on a wide scale of the health centers scheme, and utility housing, street lighting and drinking water programs will have the effect of raising individual living standards and will ensure a minimum social standard of living for everyone. In the same way, the establishment on an extensive scale of education centers and the award of scholarships will make it possible for gifted young people to overcome social barriers and accede to the level they deserve to occupy in the community. This will accordingly assure full utilization of labor force resources, parallel to that of other economic resources.

Finally support programs which are economically justified will be developed. This support will also contribute to the rapid growth of economic activities. The main principle in providing support for both private and public sectors will be to do this openly rather than indirectly so that the kind of support and the sums involved are clearly defined and limited.

SECTION X

FOREIGN ECONOMIC RELATIONS

BASIC PRINCIPLES AND METHODS

The aim is to move progressively towards balance in external payments over the fifteen-year period. The measures to be taken and the new investments to be made in the five-year plan period will bring Turkey closer to this target. This however, does not mean that Turkey will cease to import foreign capital at the end of fifteen years. The projections made in this respect indicate that once targets have been realized towards the end of the Second Five-Year Plan period, development efforts can be pursued without recourse to any expectional aid. From then on, economic conditions will be such that an increase in the volume of private capital movements and normal bank credits may ensue. It is hoped, therefore, that the foreign capital needs of the Third Five-Year Plan will, under normal conditions, be met by capital movements of this kind. In the following periods any deviations from equilibrium in the balance of current accounts may necessitate resorting to foreign capital and bank credits to cover foreign debt repayments. This would result in Turkey's remaining for some length of time in a "net debtor" position. The realization of these general targets depends on the implementation of the program stated below.

Export earnings, which have been stagnant, must be increased. To achieve this, the sales of traditional export goods must be realsed and means sought to export as many semi-processed and/or finished goods as possible. At the same time, the the composition of exports must be changed and products for which demand rises faster than for those presently exported must be offered on foreign markets.

A considerable increase in imports is to be expected as a result of development efforts. New investments and the maintenance of existing establishments will create a demand for capital goods. With regard to industrialization, an effort will be made to set up industries which use relatively greater amounts of domestic raw materials. Only those branches of industry which are efficient and which should be able to compete with foreign producers will be allowed to import raw materials. It is also assumed that the rising level of incomes will create more demand for imported consumer goods.

The aim of foreign trade policy will be to curb this demand as much as possible and to encourage the use of domestic raw materials with a view to saving foreign exchange. Certain specific measures and a consistent investment policy will be the instruments used to realize these targets. Most important of all, however, is that the internal equilibrium of the economy will be constantly watched and action will be taken to prevent substantial increases in domestic prices.

Another long-term target is to reverse the present unfavorable balance of invisible transactions. To this end, revenues from tourism are to be raised above tourism expenditures in the course of the plan period, even though expenditures on foreign tourism may tend to increase as a result of rising incomes. With regard to other invisible items, measures to realize savings and increase receipts will tend to bring about a better balance in the long run.

In order to secure the contribution of foreign capital to Turkey's development measures will be taken to encourage the inflow of this capital. By obtaining increasingly higher amounts of project-bound credit from international financial organizations, it is intended to normalize part of the increasing inflow of foreign capital.

Efforts will be made to ensure that public debt repayments in connection with the credits obtained so far and those to be obtained in the future may be discharged in a way which will not impede development efforts.

In the estimates made on the basis of balance of payment projections, the general and specific repercussions of development on these balance items have been taken into account. The effect of the additional measures to be taken with a view to promoting exports realizing import savings and creating favorable movements with regard to invisible items have also been taken into account.

The economic implications for Turkey of the Common Market, which were taken into account while preparing the plan, will also be carefully estimated in preparing annual programs.

PRESENT SITUATION

a. Foreign Trade Policy

(1) Import Policy

Below is a summary of the foreign trade regulations which have been applied since August 4, 1958, when the Stabilization Program was put into effect.

(a) Imports are based on a quota system. Progress with regard to liberalization was made in the quartely and half-yearly global lists issued after May 15, 1959.

(b) Imports from European Monetary Agreement countries and convertible currency areas take place on the basis of quota and liberalization lists. The 1961 liberalization list accounts for 50.2 per cent of Turkey's imports from free currency areas. If imports of U. S. agricultural surpluses are excluded, this percentage rises to 58.6 per cent. The liberalization list is composed for 60 per cent of raw materials, for 27 per cent of investment goods and for 13 per cent of consumer goods. The quota list consists of import allocations for industrialists and importers. This list contains products whose imports are restricted in order to protect domestic industries and save foreign exchange. The list accounts for 36.5 per cent of Turkey's imports from free currency areas. With the exclusion of quotas for imports of U. S. agricultural surpluses, it accounts for 26 per cent of Turkey's imports from free currency areas.

(c) Imports from countries with which Turkey has bilateral trade and payment agreements are based on clearing accounts and quotas are stated in the import lists attached to these agreements. Such lists are reviewed annually. In recent years, imports from bilateral agreement countries have declined. Imports from these countries averaged 12.5 per cent of total Turkish imports in the years 1959-1961.

(d) In the preparation of import lists, account is taken of the import components of investments and quotas are assigned accordingly.

(e) In meeting the import requirements of industry, certain facilities are granted to industrialists.

(f) Owing to the special position of the public sector, imports in this sector are subject to directives issued by the Ministry of Finance. As far as possible, these directives conform to general principles.

(g) A. I. D. financed imports are carried out under the special methods and principles of assistance programs.

(h) Import prices are verified by subsequent price registration which causes no delay.

(i) Imports on a barter basis or other tied transactions are not authorized.

(j) Imports of old or used goods are not permited.

(2) Export Policy

(a) As formerly, there are no restrictions on exports. Excluding items whose export is prohibited under statute for health, security or other reasons, the export of all products is free. This principle may only be transgressed in two cases :

(i) Exports to countries with which Turkey has bilateral trade and payment agreements are subject to the delivery of licences issued in accordance with the provisions of the agreement and its export quotas. Exports to those countries account for around 14 per cent of Turkey's total exports.

(ii) Exports of the items specified in the lists attached to Foreign Trade Regulations must made under licence even if exported to free currency areas. At present, exports of the following items are subject to licence : cereal, flours, bran, oil cakes, walnut tree trunks, defective hazelnuts, boracite and boron compounds, scrap iron and margarine. These items represent about 5.5 per cent of total exports. The reasons for licensing the export of these products are : food requirements in the case of cereals, cereal flours, and margarine; the detrimental effect of inferior quality goods on the export trade in the case of defective hazelnuts; the fact that it is an important product in the case of boracite; defence requirements in the case of walnut trunks.

(b) In order to prevent artificial price fluctuations, the most important export items are subject to registration by the departments declared competent by the Ministry of Trade. Exports of pistachio nuts, gut, hides and skins, hazelnuts, rose oil, figs and fig pastes, mineral ores, vegetable oils, cotton, sponges, mohair, wool and tobacco are subject to registration. These products accounted for 72 per cent of total exports in 1961. In most cases exports are registered with the related exporters' unions. (Chrome for instance, is registered with the Chrome Producers' Board; other minerals, with the Mining Associations of Turkey; tobacco, with the Tobacco Growers' Associations and Unions under the responsibility of the Federation of Tobacco Growers; certain specific products, with the Chambers of Commerce and Industry.

(c) Some specific export arrangements are authorized subject to certain restrictions. These include consignment exports, exports made on the basis of joint accounts, exports with long-term delivery conditions under bank guarantee, exports with credit under bank guarantee and provisional exports of raw materials and semi-processed goods to foreign countries where they are to be processed into finished or semi-finished goods.

(d) Barter exports or other tied transactions are not authorized.

(e) Essential factors in the pricing of export goods are the price levels on the domestic and foreign markets. The return of export earnings to Turkey is subject to the provisions of the Law on the Protection of Turkish Currency.

(3) Liberalization of Invisible Items

Invisible items are considered under four categories.

(a) Items which are wholly liberalized

The movements in and out of Turkey of fully liberalized items are not subject to any restrictions. Such important items as the following are among these : import and export freight, port expenses, railroad transport ,fare sales to travellers not residing in Turkey, expenses for urgent repairs or repair during travel, expenses relating to storage, customs, taxes and other important items such as transit duties, technical aid, brokerage, advertisement, cinema films, wages and salaries, quarantees, indemnities and insurance premiums. Thus 30 to 35 invisible items out of a total of 47 have been wholly liberalized.

(b) Items which are partly liberalized

The following are affected : airline fares and freight, fuel, food and crew expenses in maritime transport, educational or business trips and professional incomes and profits. The transfer of capital and profits is liberalized within the provisions of the Law on the Encouragement of Private Foreign Capital and the legislation on petroleum.

(c) Items liberalized subject to certain conditions

Items which are liberalized under certain conditions are those which are only restricted from the point of view of form. They include ship maintenance expenses and freight, the transfer of which is distinct from that of the sale prices of the goods.

(d) Items which are wholly restricted.

For wholly restricted items, movements in and out of the country are subject to control. In this group are such items as repair/assembly expenses, representation expenses, the participations of insurance companies in the overall expenses of the main firms or vice versa, contracts on award, tourism, rentals, payments connected with immigrants, patents and copyrights, bonuses and competition awards.

b. Problems Related to Exports

Several factors act concurrently in impeding the growth of exports :

(1) The population is rapidly increasing. The resulting rise in internal consumption has the effect of curtailing the quantity of goods available for export. This partly explains why rising production in cereals and other foodstuffs has been accompanied in recent years by a fall in exports of these products and also why rising production in other goods has often not been accompanied by a corresponding increase in exports of these goods.

(2) The development of domestic industries leads to increased internal demand for a number of export items and results in lower exports of some exportable raw materials. For various goods, exports have fallen in relation to production with the rise of internal demand. Thus, the development of the vegetable oil industry has led to a decline in oil seed exports, and the rise in cotton exports has not been in proportion to the rise of cotton production because of the growth of the textile industry. Therefore, measures must be taken to remedy the restrictive effect on exports of higher domestic consumption. Programs for raising agricultural production to higher levels are included in the plan. In his connection particular stress is laid on the use of irrigation, fertilizers and on pest control.

TABLE 370 — Community Exchange Wholesale Quotations

(Krş/Kg)

Items	1958	1959	1960	1961 Jan.	1961 Mar.	1961 Sept.	1961 Dec.
1. COTTON							
a. Adana (Standard white I)	432.8	460.0	507.7	522.0	517.9	492.0	520.1
b. İzmir (Standard white I)	470.2	502.7	561.5	554.6	555.6	561.3	556.5
2. HAZELNUTS							
(Round shelled hazelnuts)							
a. Giresun	433.0	459.5	867.5	924.0	824.0	1,013.0	1,140.0
b. İstanbul	445.5	662.8	872.2	1,019.3	1,050.9	1,001.9	1,187.6
c. Ordu	437.8	654.3	886.9	1,017.1	1,048.2	1,002.7	1,141.7
d. Trabzon	432.5	778.8	836.1	1,027.5	1,050.0	1,015.0	1,210.0
3. RAISINS							
(Seedless)							
İzmir : No. 8	166.0	179.2	216.0	—	—	184.6	179.1
No. 9	168.0	217.7	217.0	254.0	251.9	187.8	180.9
No. 10	171.4	198.3	224.1	261.0	258.2	193.1	184.2
4. MOHAIR							
a. Ankara	1,063.0	1,523.2	1,632.4	1,880.0	1,835.1	1,841.9	1,796.7
b. İstanbul (Basic good)	1,062.0	1,619.2	1,731.0	1,807.3	1,870.6	1,769.4	1,867.5
5. OIL SEEDS							
a. Sunflower seeds (Tekirdağ)	84.1	78.9	95.1	102.5	103.5	96.6	103.2
b. Flax seeds (İstanbul)	127.3	114.3	131.5	136.5	144.8	148.6	172.4
c. Cotton seeds (Adana)	49.3	52.3	58.1	60.2	61.8	56.2	58.2
6. BARLEY (Konya - white)	30.0	33.5	38.2	38.0	38.8	47.9	55.6
7. CANARY SEED (Tekirdağ)	46.0	82.0	95.8	160.0	131.9	215.1	206.8

(3) Demand elasticity for Turkey's export goods is low. The studies made on this subject show that the elasticity of the main export products, mohair excepted, is near zero. It follows from this that no significant development can be expected in exports of these goods and that a change in the composition of Turkey's exports is essential.

(4) Since 1958, when devaluation took place, the wholesale price indices of foodstuffs and raw materials have shown a steady increase. Commodity exchange quotations also confirm this. Wholesale exchange quotations are shown in Table 370. On the other hand, raw material prices have been falling on international markets. This, together with the rise in internal prices has impaired Turkey's competitive position on export markets as a primary product exporter.

(5) In addition, there are certain factors which perturb competition conditions on export markets. The activities of cartels, which ektend to Turkey and other countries, have an influence on quantities and prices.

c. Balance of Payments

The balance of payments and foreign trade figures for 1960-61 and estimates for 1962 are given in Tables 371, 372 and 373. Higher exports in 1961 were due to increases in exports of sugar, tobacco, cotton, livestock, mohair wool and skins. Tobacco exports in particular showed an outstanding increase. Export receipts in 1960, 1961 and 1962 (estimates) amounted to 321, 347 and 325 million dollars respectively. Converted into 1953 export prices, these receipts would have represented 346, 383 and 364 million dollars respectively. This indicates that the unfavorable terms of trade for Turkey since 1953, which was considered a normal year in respect to world prices, has led to a steady decline in foreign exchange earnings.

TABLE 371 — 1960-1962 Balance of Payments (Million $)

	1960	1961	1962 Estimates
Imports (c.i.f.)	468	510	560
Exports (f.o.b.)	321	347	325
BALANCE OF TRADE	— 147	— 163	— 235
Interest payments	— 29	— 30	— 33
Other invisibles (net)	— 15	— 25	— 45
Invisible items (net)	— 44	— 55	— 78
Infrastructure and "off shore" receipts	52	43	45
BALANCE OF CURRENT ACCOUNTS	— 139	— 175	— 268
Debt payments	— 65	— 84	— 87
A.I.D., C.C.C., D.L.F. grants and credits	116	160	198
Private foreign capital	24	24	25
Other foreign capital (1)	67	92	49
TOTAL CAPITAL MOVEMENTS	207	276	272
Omission and errors (+ outflow)	— 48	— 43	—
Changes in reserves	51	60	—
BALANCE	—	—	83

(1) Export - Import Bank, I.B.R.D., E.M.A. (net), I.M.F., O.E.C.D., German and sellers' credits.

TABLE 372 — 1960 - 1962 Imports (Million $)

Import Items	1960	1961	1962 (Estmiates)
Investment goods	191.4	185.3	235.0
Raw materials	217.6	207.9	220.0
— Normal imports	195.5	201.6	205.0
— U. S. surpluses	22.1	6.3	15.0
Consumer goods	59.2	116.3	105.0
— Normal imports	59.2	58.1	50.0
— U. S. surpluses	—	58.2	55.0
TOTAL	468.2	509.5	560.0

TABLE 373 — 1960 - 1962 Exports (Million $)

Export Items	1960	1961	1962 (Estimates)
AGRICULTURAL PRODUCTS	238.0	274.1	257.6
a. Cereals, pulses and food crops	14.5	14.7	14.4
b. Fruit and vegetables	78.5	73.3	72.0
c. Industrial crops and forestry products	119.2	150.5	137.1
d. Livestock products, game and fish	25.8	35.6	34.1
INDUSTRIAL PRODUCTS	63.0	54.0	47.9
MINE AND QUARRY PRODUCTS	19.7	18.6	19.5
TOTAL	320.7	346.7	325.0

BALANCE OF PAYMENTS PROJECTIONS

These projections are shown in Table 374. In these projections account was taken of the requirements and development prospects disclosed by sector studies. The results arrived at were revised in the light of global evaluations.

a. Imports

Imports were examined under three main groups: (1) capital goods, (2) consumer goods and (3) raw materials.

First, gross import requirements were computed. Then, the import replacement values expected to follow from new investments and from other measures to be adopted were deducted from these figures.

In projecting imports of capital goods, account was taken of the relationship between investments and imports of capital goods in the past. Account was also taken of the investments planned for the coming years and of the changes to be made in the structure of these investments as compared with those of the former period. The findings were checked, as in the case of other projections, with the figures found under sector requirements. It was found that the foreign exchange component of investments represented on average a third of total investments.

TABLE 374 — Balance of Payments Projections

(Million $)

	1963	1964	1965	1966	1967	Total of 5 years
Imports (c.i.f.)	567	627	630	675	704	3 203
Exports (f.o.b.)	348	374	394	427	457	2 000
BALANCE OF TRADE	— 219	— 253	— 236	— 248	— 247	— 1 203
Tourism and travel receipts	13	18	25	35	48	139
Tourism and travel expenditure	— 20	— 21	— 23	— 25	— 28	— 117
Private profit transfers (net)	— 15	— 17	— 20	— 25	— 30	— 107
Payment of debt interests	— 28	— 24	— 29	— 16	— 12	— 99
Other invisible items (net)	— 29	— 25	— 20	— 20	— 20	— 114
Invisible items (Net total)	— 79	— 69	— 57	— 51	— 42	— 303
Infrastructure and "off shore" receipts	47	49	51	53	55	255
CURRENT ACCOUNTS	— 251	— 273	— 242	— 246	— 235	— 1 246
Foreign debt payments	— 148	— 99	— 164	— 80	— 76	— 567
P.L. 480 Shipments	60	60	60	60	50	290
Private Foreign Capital	25	25	25	25	25	125
Other Capital Imports	349	322	356	276	270	1 573
TOTAL CAPITAL MOVEMENTS	434	407	441	361	345	1 988
Net error, omission and reserve changes	35	35	35	35	35	175

Raw material imports (*) were broken down into the amounts allocated to the various branches of industry. These amounts were assessed on the basis of prospective developments in the industrial branches concerned.

It was estimated that imports of consumer goods (*) would also rise together with incomes. With the addition of imports of U.S. agricultural surpluses to the import figures computed above, it will be possible to build up the necessary stocks in the coming period.

TABLE 375 — Import Projections (Million $)

Imports	1963	1964	1965	1966	1967
Investment goods	241.1	274.1	296.0	332.5	363.0
Raw materials	234.5	261.5	299.5	325.0	363.5
Consumer goods	71.4	76.4	84.5	87.4	93.5
TOTAL	**547.0**	**612.0**	**680.0**	**744.9**	**820.0**
U.S. Agricultural surpluses	60.0	60.0	60.0	60.0	50.0
TOTAL	**607.0**	**672.0**	**740.0**	**804.9**	**870.0**
Import substitution	— 40.0	— 45.0	—110.0	—130.0	—166.0
Total import requirements	567.0	627.0	630.0	674.9	704.0

Net import requirements were found after deducting the expected annual import substitution figures computed above. Import replacement figures were found by evaluating in terms of foreign trade substituties possibilities indicated in the sector programs. After replacement, imports in 1967 will increase by 26.5 per cent over the 1962 import estimates. The biggest increase in this total will be in imports of investment goods. The next largest increase will be in raw material imports. Import replacement has been provided for more or less to the same extent in each of the three groups.

b. Exports

Export projections were made by proceeding along two lines. Firts, account was taken of production surpluses found as a result of comparing demand and supply estimates for various sectors. Secondly, by examining past export series, the long-term relationship between various export goods and the level of incomes in buyer countries was determined and at the same time developments in the deliveries of competitor countries were studied. Measures were defined to increase the production of exportable surpluses and in particular of the commodities which would find outlets on foreign markets.

c. Invisibles

The most important invisible export item is that of tourism. In the plan, tourism and travel revenues were estimated on the basis of a greater number of tourists visiting

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(*) Exclusive of imports of U.S. agricultural surpluses.

Turkey, a rise in the average length of time tourist stays in the country, and an increase in the average amount of money spent by tourist. These improvements in the tourist trade are expected to follow on the increase in tourism investments and publicity campaigns. A rise in tourism and travel expenditures in line with that of tourism revenues is expected. Tourism expenditures may rise from 20 million dollars in 1963 to 28 million dollars in 1967.

Probable developments in the transfer of profits on private foreign capital investments have been assessed in the light of present and expected investments. Payments of debt interest refer to payments of interes on current debts.

In estimating other invisible items, account was taken of the fact that, with the modernization of the national merchant fleet, a larger part of the country's foreign trade shipments as well as of international maritime transport would be carried by Turkish vessels.

As seen from Table 374, the net deficit in invisibles will be decreased by half at the end of the first five-year period.

d. In estimating "Infrastructure and off shore" receipts, expected increases in NATO orders were taken into account.

Towards the end of the plan period and in succeeding years the total revenue from invisibles plus "Infrastructure and off shore" receipts will thus begin to be entered as a positive item in the balance of current accounts.

e. Running roughly parallel to the trade balance, the balance of current accounts will show a growing deficit in the first years of the plan which will fall to between 230 and 240 million dollars in the last years. Foreign exchange earnings, estimated to cover 62 per cent of total current foreign exchange expenditures in 1963, will amount to 71 per cent of this total in 1967.

f. Payments of foreign debts are estimated to reach 567 million dollars in the five-year period. This estimate is based on the assumption that future borrowings will not affect the first five-year plan. If the item of 99 million dollars included in invisibles for the payment of debt interest is added to this figure, Turkey's foreign debt obligations amount to 666 million dollars.

The outstanding foreign debt which will have to paid by the year 2000 is 1,276.7 million dollars. In this amount 250.3 million dollars is payable in Turkish liras, and will not affect the balance of payments. The balance of 1,026.4 million dollars constitutes the debt to be paid in foreign currency up to the year 2000. After 567 million dollars of this is paid in the first five-year plan period, a balance of 459 million dollars will remain to be paid until the year 2000.

TABLE 376 — Export Projections (Million $)

	1963	1964	1965	1966	1967
AGRICULTURAL PRODUCTS	269.8	291.2	298.0	329.5	348.5
a. Cereals, pulses and food crops	17.8	18.2	18.6	19.0	19.4
b. Fruit and vegetables	84.2	93.7	86.5	103.5	105.4
c. Industrial crops and forestry products	131.0	138.2	146.1	152.9	160.7
d. Livestock, hunting and fishery	36.8	41.1	46.8	54.1	63.4
INDUSTRIAL PRODUCTS	56.0	60.9	71.5	73.4	82.3
MINE AND QUARRY PRODUCTS ...	22.0	22.2	24.0	24.3	26.0
TOTAL	347.8	374.3	393.5	427.2	457.2

The five-year total of the current account deficit, foreign debt payments and reserve fund (or the net error and omission deficit) amounts to 1,988 million dollars. This sum represents therefore Turkey's total foreign capital requirements. After deducting from this sum 415 million dollars for imports of U.S. agricultural surpluses (PL 480 shipments) and for the expected private foreign capital inflow, the remaining 1,573 million dollars gives the amount of foreign aid which will have to be secured over the five-year plan period.

Substantial imports of up to 700 million dollars will take place in the last years of the plan. Export earnings,on the other hand will depend chiefly on exports of agricultural and mining products. Agricultural output, even when all the necessary measures are taken, will still be largely subject to unpredictable weather conditions. As to mineral and mineral ore exports, they are, of all export items those which are most affected by changes in the economic situation of industrialized countries. It follows therefore that the realization of a large import program is based on the existence of foreign exchange reserves. Balanced external payments imply a foreign trade structure which functions without excessive strain in the face of economic fluctuations.

FOREIGN TRADE POLICY AND MEASURES TO BE TAKEN

a. General Principles

Foreign trade will be an important factor in the development of the country. A long-term foreign trade policy has therefore to be defined and implemented. This will include the protection of the economy from foreign competition as a whole and that of certain sectors or industries in particular. A moderately high ad valorem general protection is necessary in order to overcome the disadvantage of being an underdeveloped country trading with advanced countries. This general protection should tend to decrease in time. In addition to this, selective measures are needed to protect and promote certain new industries. These protected industries, must be such as to further the attainment of the plan targets. On the other hand the technical and financial structure of these industries should hold out assurance of gradual reductions in production costs. The level of protection should be determined in a way which will stimulate the protected industries to reach competitive status and protection should be removed when this is attained.

Customs duties, quotas and other protective measures should be considered as separate and complementary instruments. In addition to a selective system of protection, a selective policy of tariff reductions may also have to be applied to curb rising trends in internal cost structures and shorten the setting-up period of newly created industries.

While following a stable and protective development policy, the normal economic rules will be strictly observed. Business circles will thus be able to make sounder estimates for the future.

The object of tariff regulations will be to protect domestic industries and not to secure public revenue.

b. Measures

(1) Measures concerning imports

(a) Foreign trade policy will be harmonized with the industrial policy defined for individual sectors in the sector programs.

(b) Import lists will be revised with a view to protecting and encouraging domestic industry and to realizing savings in foreign currency.

(i) Lists will be revised on the principle that goods of which internal production is quantitatively and qualitatively sufficient to meet internal requirements at fair prices should not be included in import lists.

(ii) Goods of which internal production partly covers internal needs will not be included in liberalization lists and if already included, will be taken out. Quotas for these goods will be issued in relation to their importance for the economy, the level of demand and of internal production, and foreign payment possibilities.

(iii) Import programs will give priority to imports which contribute to the realization of plan targets. The import requirements of the industries concerned will be examined and fulfilled in the light of their implications for the plan.

(iv) Quotas which are subject to the authorization of specific offices and industrialists' quotas will only be issued in cases where this is necessary.

(v) Luxury goods will not be included in import programs.

(c) Imports and exports will be coordinated to prevent the importation at higher prices of goods which are being exported.

(d) In drawing up import lists, the importance of not exceeding present and prospective foreign exchange resources will be stressed. In this regard, when determining the coverage of free currency area import lists, bilateral import possibilities will be kept in mind, and care will be taken not to increase the burden on free foreign exchange.

(e) Strict measures will be taken to ensure that imports take place within the period appointed and are conform to purpose.

(f) An orderly system of imports will be applied. Frequent changes in provisions relating to imports will not be made so that stability and continuity may be assured.

(g) Measures will be taken to introduce specialization in imports. Specific qualifications will be required in the import business and importers' licences will be issued in accordance with these requirements.

(2) Measures concerning exports

(a) As many of Turkey's export goods, despite their high quality, do not conform to international standards, they cannot be disposed of freely in foreign markets. It is therefore necessary to define standards for all export goods as soon as possible and ensure that they are applied.

(b) Packaging of export goods is not given sufficient attention although package and presentation contribute notably to the introduction and disposal of products on foreign markets. Attention has therefore been given to the setting-up of modern packaging facilities.

(c) The quality control of many products is inadequate. Appropriate remedial measures should be taken as soon as possible.

(d) More market studies are needed. This kind of research should be supported by the State. Particular emphasis should be laid on market research for new export commodities and those for which it is difficult to find outlets.

(e) Sales organization on foreign markets is inadequate and should be improved. Efforts to introduce Turkey's export goods on external markets have been insufficient. The practise so far has been to wait for buyers to come and buy goods in Turkey, whereas it should be up to exporters to sell their goods in buyer countries. To remedy this, the appropriate arrangements should be made and due stress laid on the publicity and sales promotion aspects. This is of the utmost importance for new export goods and those for which it is difficult to find outlets.

(f) The problem of credit facilities for exporters will be solved. Sufficient credits such as may also cover stockpiling costs should be made available to exporters.

(g) Exports should be encouraged by tax incentives. There is need, especially in exports of manufactured goods, for a practical tax system which will assure that all indirect taxes entering into the cost of export goods are refunded to the exporter as these goods leave the country.

(h) Implementation of export policy will be facilitated. The number of government agencies dealing with export procedures will be reduced to the minimum. The delivery of licenses will be speeded up and any necessary changes announced before the beginning of the export season.

(i) Most of Turkey's export goods are highly perishable agricultural products which are difficult to store. At present, the degree of wastage in stocks is high owing to bad storage conditions. Due stress was laid in the sector programs on raising the number and quality of storage facilities.

(j) There is need for qualified personnel at every level in standardization, packaging and other processes connected with exports. Exporters should be encouraged to participate in the training of such personnel.

(k) Measures will be taken to ensure that the supply of home-produced packaging material is sufficient to meet needs.

(l) Severe penalties will be imposed, as necessary, to ensure the conformity of export deliveries to the samples previously submitted.

(m) Encouragement will be given to the setting-up of voluntary exporters' unions which will work towards solving common problems and will facilitate the exchange of information among firms working in the same field.

(n) The establishment, subject to certain conditions, of agencies representing exporters or exporters' unions in importing countries and such promotional activities as participation in international fairs should be encouraged.